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AGRICULTURE

OF

MASSACHUSETTS.

SYNOPTICAL AND ANALYTICAL INDEX,

1837-1892.

PREPARED AND ARRANGED BY
FREDERICK H. FOWLER, B.Sc.,
First Clerk, Office State Board of Agriculture.

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Commonwealth of Massachusetts.

[RESOLVES OF 1893, CHAP. 25.]

RESOLVE providing for the Printing and Distribution of a Synoptical and Analytical Index to the Annual Volumes of the "Agriculture of Massachusetts."

Resolved, That the secretary of the board of agriculture cause to be electrotyped, printed and bound for distribution, five thousand copies of a synoptical and analytical index to the fifty-two annual volumes of the "Agriculture of Massachusetts."

[*Approved March 9, 1893.*]

OFFICE STATE BOARD OF AGRICULTURE,
BOSTON, MASS., Sept. 1, 1893.

In accordance with the above Resolve this Index has been prepared by Mr. F. H. Fowler, First Clerk in the office of the State Board of Agriculture. It has taken months of close and continuous application. It is expected that it will make the information contained in the fifty-two volumes of "Agriculture of Massachusetts" more accessible and thereby much more valuable. The Index is committed to the agricultural public of Massachusetts, and particularly to those who have preserved a full set of the volumes indexed, with the hope that it will prove useful and valuable to them, and that it will help them appreciate the liberality of the State of Massachusetts in providing for free distribution such a library of information on agricultural subjects.

WILLIAM R. SESSIONS,
Secretary State Board of Agriculture.

EDITOR'S PREFACE.

The volumes known as the "Agriculture of Massachusetts" cover three periods, viz.: the period of the reports of Rev. Henry Colman, commissioner for an agricultural survey of the State, 1837-40; the period of the abstracts from the returns of the agricultural societies, compiled by the secretary of the Commonwealth, 1845-52; and the period of the annual reports of the secretary of the State Board of Agriculture, 1853-92.

The volumes published by Mr. Colman and by the secretary of the Commonwealth contain simply indexes of subjects. In 1877 an analytical index to the twenty-five previous annual reports of the secretary of the State Board of Agriculture was prepared, under the direction of Secretary Flint, and made a portion of his report for 1877-78. As the year 1892 rounds out forty years of the life and work of the State Board of Agriculture, it seems quite proper that an index to the forty annual volumes issued should be prepared. It seems desirable also to include with this index similar indexes to the volumes of Mr. Colman and the secretary of the Commonwealth, in order that a uniform whole may be obtained.

The resolve providing for an agricultural survey of the State bears date of April 12, 1837, and reads as follows:—

Resolved, That his excellency the governor, by and with the advice of the council, is hereby authorized and requested to appoint some suitable and competent person, whose duty it shall be, under the direction of his excellency the governor, to make an agricultural survey of the Commonwealth, collect accurate information of the state and condition of its agriculture, and every subject connected with it, point out the means of improvement, and make a detailed report thereof with as much exactness, as circumstances will admit.

Resolved, That a summary of such survey, and examination shall be furnished to his excellency the governor every six months, until the whole shall be completed; and at such other times, as shall be

required, to be published in such way and manner as he, with the advice of the council shall deem to be expedient and useful; and he is authorized to draw his warrants, from time to time, upon the treasury for such sums, as may be necessary to defray the expenses of said survey, and to enable the person, so appointed, to proceed in the execution of the duties, that shall be required of him; and to pay the same to him, not exceeding the sum of two thousand five hundred dollars per annum.

Rev. Henry Colman was appointed commissioner on the 27th of the ensuing May, and on the 15th of June received instructions for the prosecution of the work. He published four reports, which had a wide circulation in this country and attracted favorable attention abroad. The resolve was repealed, and the office discontinued, by chapter 14 of the Resolves of 1841.

By chapter 111 of the Acts of 1845, approved March 7, the secretary of the Commonwealth was directed to cause as full an abstract from the returns of the agricultural societies to be made and published in each year, for distribution, as in his judgment would prove useful. Eight of these volumes were published. By the act establishing a State Board of Agriculture it was provided that all the duties of the secretary of the Commonwealth relating to returns of agricultural societies should be performed by the secretary of the Board of Agriculture.

Probably the first published article upon the subject of a Board of Agriculture for Massachusetts was a report by Commissioner Colman while engaged in making an agricultural survey of the State.*

The commissioners to whom were referred the resolves of the Legislature of 1850, concerning the establishment of an agricultural school, etc., in their report in January, 1851, recommended the establishment of a State Department of Agriculture, which should sustain a similar relation to agriculture and the schools connected with it, as the board and secretary of education do to primary schools.

In the "Advertisement to the Transactions of the Agricultural Societies" for the year 1850, Hon. Amasa Walker, sec-

* Referred to in his fourth report, page xiii, but not printed in either of his four reports.

retary of the Commonwealth, wrote: "But something it is believed may be safely attempted, a beginning may be made, a Board of Agriculture may be established by the authority of the State; corresponding in its general features to the Board of Education. Such a board might at once be empowered to employ an able secretary, whose whole time shall be devoted to the work of obtaining and diffusing information on the subject of agricultural education, and whatever else concerns the great farming interests of the Commonwealth."

An Associated Agricultural Convention was held at the State House in Boston, Thursday, March 20, 1851. At the afternoon session Rev. C. C. Sewall of Medfield, from the business committee, reported several resolutions. Among them was the following:—

Resolved, 2. That it is expedient to establish a Central Board of Agriculture, to be composed of delegates from the various incorporated agricultural societies of the Commonwealth, whose duty it shall be to meet semi-annually, or oftener, if it shall be deemed expedient, and to recommend to the several societies uniform rules of action, and to take into consideration all subjects pertaining to the interests of agriculture.

After full discussion, on motion of Hon. George Denny, president of the Westborough Society, it was

Voted, That the Central Board, provided for in the second resolution, consist of three delegates from each incorporated agricultural society, and that the president and secretaries be requested to inform the societies of this resolution.

The first meeting of the voluntary Massachusetts Board of Agriculture was held Sept. 3, 1851, at the State House, Boston. The following list of officers for a permanent organization of the Board was reported and accepted:—

President, MARSHALL P. WILDER.

Vice-presidents, HENRY W. CUSHMAN, JOHN W. LINCOLN.

Corresponding Secretary, ALLEN W. DODGE.

Recording Secretary, EDGAR K. WHITAKER.

The second meeting was held at the State House, Boston,

Jan. 14, 1852, at which time a constitution and by-laws was adopted, and it was

Resolved, That, inasmuch as agriculture is the chief occupation of her citizens, the Commonwealth, in the organization of its government, should be provided with a Department of Agriculture, with offices commensurate with the importance of the duties to be discharged, of the abilities to be required, and of the labors to be performed.

A third meeting was held at the State House, Boston, Feb. 3, 1852.

This Board, although unaided by the State, carried on a series of extensive operations through the year, appointed committees to visit and report upon all the exhibitions of the different agricultural societies, and by its vigorous efforts aroused so great an interest in agricultural affairs that, at the session of 1852, the Legislature was induced, with great unanimity, to establish a State Board of Agriculture. This was done by chapter 142 of the Acts of 1852, approved by His Excellency Gov. Geo. S. Boutwell, April 21, 1852.

By this law the Board was made to consist of His Excellency the governor, His Honor the lieutenant-governor, and the secretary of the Commonwealth, *ex officio*; of one member from each of the agricultural societies in the Commonwealth that received an annual bounty from the State, and of three members to be appointed by the governor and council. Provision was made for the election of a secretary of the Board, who was in reality to be its executive officer. The Board has been from time to time enlarged by the addition of the president of the Massachusetts Agricultural College in 1866 and the chemist of the Board in 1874, as members *ex officio*, and by the incorporation of new societies, until it now numbers forty-six.

The first meeting of the State Board of Agriculture was held at the Council Chamber in Boston, July 22, 1852, with His Excellency Governor Boutwell as presiding officer, and the secretary of the Commonwealth, Hon. Amasa Walker, as secretary *pro tem*. There were eighteen persons present, among whom was Hon. James S. Grinnell of Greenfield, representing the Franklin County Agricultural Society, and who is still an honored member of the Board. The second meeting was held

August 5 following, when Dr. Edward Hitchcock, president of Amherst College and one of the members at large appointed by the governor, was unanimously elected secretary of the Board; but his duties in connection with the college compelled him to decline the proffered honor, which he did by letter dated Aug. 21, 1852. Jan. 25, 1853, the Board elected Charles L. Flint, Esq., of New York, as secretary, which position he retained until his resignation was accepted, Aug. 25, 1880.

Feb. 3, 1860, Prof. J. W. P. Jenks of Middleborough was appointed zoölogist of the Board for the year 1860. Dr. A. S. Packard, Jr., was appointed entomologist of the Board Aug. 1, 1870, and made several annual reports. Feb. 4, 1873, Prof. C. A. Goessmann of Amherst was appointed chemist of the Board, and still holds this relation.

Aug. 25, 1880, Mr. John E. Russell of Leicester was chosen secretary, to fill the vacancy caused by the resignation of Secretary Flint. He held the position until his election to the Congress of the United States, and was succeeded by Mr. Francis H. Appleton of Peabody, Feb. 3, 1887. Mr. Appleton, however, did not assume the duties of the position, on account of ill-health, and the clerk in the office, Mr. W. H. Griffith, served as secretary *pro tem.* from March 1 to July 1, and Mr. Edmund Hersey of Hingham, a member of the Board, from July 1 to August 23, when Hon. Wm. R. Sessions of Hampden, a member of the Board, was elected secretary, and still retains the position. Feb. 3, 1887, Prof. C. H. Fernald of Amherst was elected entomologist of the Board, and still holds this relation.

It early became the desire of the Board to have such conveniences as would enable it to conduct a series of experiments in such a manner as to secure the confidence of the community. Accordingly arrangements were made whereby the Board leased the farm of the State Reform School at Westborough for a period of five years, the transfer being made March 24, 1854, to go into effect April 1, 1854.

Annual public winter meetings for lectures and discussions were instituted by vote of the Board, Jan. 15, 1863, and they have been held as follows: —

1863 — Springfield, . . .	Dec. 8-11.	1879 — Greenfield, . . .	Dec. 2-4.
1864 — Greenfield, . . .	Dec. 13-15.	1880 — Southborough, . . .	Nov. 30,
1865 — Worcester, . . .	Dec. 12-14.		Dec. 1, 2.
1866 — Salem, . . .	Dec. 11-13.	1881 — Bridgewater, . . .	Dec. 6-8.
1867 — Concord, . . .	Dec. 10-12.	1882 — Northampton, . . .	Dec. 5-7.
1868 — Amherst, . . .	Dec. 8-10.	1883 — Lowell, . . .	Dec. 4-6.
1869 — Pittsfield, . . .	Dec. 7-9.	1884 — Great Barrington, . . .	Dec. 2-4.
1870 — Framingham, . . .	Dec. 13-15.	1885 — Framingham, . . .	Dec. 1-3.
1871 — Fall River, . . .	Nov. 21-23.	1886 — Barre, . . .	Nov. 30,
1872 — Barre, . . .	Dec. 3-5.		Dec. 1, 2.
1873 — Fitchburg, . . .	Dec. 2-4.	1887 — Springfield, . . .	Dec. 6-8.
1874 — Westfield, . . .	Dec. 1-3.	1888 — Easthampton, . . .	Dec. 4-6.
1875 — Haverhill, . . .	Nov. 30,	1889 — Fitchburg, . . .	Dec. 3-5.
	Dec. 1, 2.	1890 — Worcester, . . .	Dec. 2-4.
1876 — Worcester, . . .	Nov. 14-16.	1891 — Boston, . . .	Dec. 1-3.
1877 — Waltham, . . .	Dec. 4-6.	1892 — Spencer, . . .	Dec. 6-8.
1878 — Hingham, . . .	Dec. 3-5.		

In addition the Board has held 91 business meetings: 69 in Boston, 14 in Westborough, 3 in Amherst, 2 in Springfield, 1 in Easthampton, 1 in Concord and 1 in Barre.

Since the organization of the Board the secretary has published forty annual volumes, comprising 24,977 pages of matter pertaining to agriculture and kindred subjects, and embracing in all an issue of upwards of 420,000 copies. An examination of the pages of this index will reveal, in a measure, the character of the agricultural literature of the last half-century, and will also indicate the part the Board has taken in the development of the agriculture of the Commonwealth. It is hardly too much to add, in conclusion, that these volumes form a complete agricultural library in themselves, and it is hoped that this index will be a key by which the valuable matter contained in them may be made readily accessible and of the greatest use possible.

Acknowledgments are due the second clerk in the office, HOWARD N. LEGATE, B.Sc., for assistance in the preparation of this volume.

F. H. FOWLER.

ROSTER BOARDS OF AGRICULTURE.

1852.

Members Ex Officio.

George S. Boutwell, Governor.

Henry W. Cushman, Lieutenant-Governor.

Amasa Walker, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Hitchcock, Edward, Amherst.

Wilder, Marshall P., Dorchester.

Wood, Nathaniel, Fitchburg.

Members chosen by the Societies.

Brewer, Francis, Springfield, Hampden Agricultural Society.

Brown, Simon, Concord, Middlesex Agricultural Society.

Fessenden, C. B. H., Sandwich, Barnstable County Agricultural Society.

French, Benjamin V., Braintree, Norfolk County Agricultural Society.

Gray, John C., Boston, Massachusetts Society for Promoting Agriculture.

Grinnell, James S., Greenfield, Franklin County Agricultural Society.

Lawton, Joshua R., Great Barrington, Housatonic Agricultural Society.

Lincoln, John W., Worcester, Worcester Agricultural Society.

Nash, John A., Amherst, Hampshire Agricultural Society.

Page, J. H. W., New Bedford, Bristol County Agricultural Society.

Parkhurst, Wm., Petersham, Worcester County West Agricultural Society.

Proctor, John W., Danvers, Essex Agricultural Society.

Reed, Stephen, Pittsfield, Berkshire Agricultural Society.

Smith, Joseph, Hadley, Hampshire, Franklin and Hampden Ag'l Society.

Sprague, Seth, Duxbury, Plymouth County Agricultural Society.

Secretary, . . . Charles L. Flint.

1853.

Members Ex Officio.

John H. Clifford, Governor.

Elisha Huntington, Lieutenant-Governor.

Ephraim M. Wright, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Hitchcock, Edward, Amherst.
 Wilder, Marshall P., Dorchester.
 Wood, Nathaniel, Fitchburg.

Members chosen by the Societies.

Brewer, Francis, Springfield, Hampden Agricultural Society.
 Brown, Simon, Concord, Middlesex Agricultural Society.
 Clapp, Henry W., Greenfield, Franklin County Agricultural Society.
 Dodge, Harvey, Sutton, Worcester Agricultural Society.
 Fessenden, C. B. H., Sandwich, Barnstable County Agricultural Society.
 French, Benjamin V., Braintree, Norfolk County Agricultural Society.
 Lawton, Joshua R., Great Barrington, Housatonic Agricultural Society.
 Nash, John A., Amherst, Hampshire Agricultural Society.
 Page, J. H. W., New Bedford, Bristol County Agricultural Society.
 Parkhurst, Wm., Petersham, Worcester County West Agricultural Society.
 Proctor, John W., Danvers, Essex Agricultural Society.
 Reed, Stephen, Pittsfield, Berkshire Agricultural Society.
 Smith, Joseph, Hadley, Hampshire, Franklin and Hampden Ag'l Society.
 Sprague, Seth, Duxbury, Plymouth County Agricultural Society.

Secretary, . . . Charles L. Flint.

1854.**Members Ex Officio.**

Emory Washburn, Governor.
 William C. Plunkett, Lieutenant-Governor.
 Ephraim M. Wright, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Hitchcock, Edward, Amherst.
 Wilder, Marshall P., Dorchester.
 Wood, Nathaniel, Fitchburg.

Members chosen by the Societies.

Brewer, Francis, Springfield, Hampden Agricultural Society.
 Brooks, John, Princeton, Worcester Agricultural Society.
 Brown, Simon, Concord, Middlesex Agricultural Society.
 Clapp, Henry W., Greenfield, Franklin County Agricultural Society.
 Fessenden, C. B. H., Sandwich, Barnstable County Agricultural Society.
 French, Benjamin V., Braintree, Norfolk County Agricultural Society.
 Lawton, Joshua R., Great Barrington, Housatonic Agricultural Society.
 Nash, John A., Amherst, Hampshire Agricultural Society.
 Newell, Moses, West Newbury, Essex Agricultural Society.
 Page, J. H. W., New Bedford, Bristol County Agricultural Society.
 Phillips, Ivers, Fitchburg, Worcester North Agricultural Society.

Reed, Stephen, Pittsfield, Berkshire Agricultural Society.
 Smith, Joseph, Hadley, Hampshire, Franklin and Hampden Ag'l Society.
 Sprague, Seth, Duxbury, Plymouth County Agricultural Society.
 Winthrop, Robert C., Boston, Mass. Society for Promoting Agriculture.

Secretary, . . . Charles L. Flint.

1855.

Members Ex Officio.

Henry J. Gardner, Governor.
 Simon Brown, Lieutenant-Governor.
 Ephraim M. Wright, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Hitchcock, Edward, Amherst.
 Wilder, Marshall P., Dorchester.
 Wood, Nathaniel, Fitchburg.

Members chosen by the Societies.

Brewer, Francis, Springfield, Hampden Agricultural Society.
 Brooks, John, Princeton, Worcester Agricultural Society.
 Chandler, Samuel, Lexington, Middlesex Agricultural Society.
 Clapp, Henry W., Greenfield, Franklin County Agricultural Society.
 Fessenden, C. B. H., Sandwich, Barnstable County Agricultural Society.
 French, Benjamin V., Braintree, Norfolk County Agricultural Society.
 Hubbard, G. W., Hatfield, Hampshire, Franklin and Hampden Ag'l Society.
 Lewis, William G., Framingham, Middlesex South Agricultural Society.
 Nash, John A., Amherst, Hampshire Agricultural Society.
 Newell, Moses, West Newbury, Essex Agricultural Society.
 Page, J. H. W., New Bedford, Bristol County Agricultural Society.
 Parkhurst, Wm., Petersham, Worcester County West Agricultural Society.
 Phillips, Ivers, Fitchburg, Worcester North Agricultural Society.
 Sprague, Seth, Duxbury, Plymouth County Agricultural Society.
 Tower, Justus, Lanesborough, Berkshire Agricultural Society.
 Wilkinson, John, Great Barrington, Housatonic Agricultural Society.
 Winthrop, Robert C., Boston, Mass. Society for Promoting Agriculture.

Secretary, . . . Charles L. Flint.

1856.

Members Ex Officio.

Henry J. Gardner, Governor.
 Henry W. Benchley, Lieutenant-Governor.
 Francis DeWitt, Secretary of the Commonwealth

Members appointed by the Governor and Council.

Hitchcock, Edward, Amherst.
 Poore, Ben : Perley, West Newbury.
 Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Bartlett, John C., Chelmsford, Middlesex North Agricultural Society.
 Brewer, Francis, Springfield, Hampden Agricultural Society.
 Brooks, John, Princeton, Worcester Agricultural Society.
 Chandler, Samuel, Lexington, Middlesex Agricultural Society.
 Felton, Oliver C., Brookfield, Worcester South Agricultural Society.
 Field, Thomas J., Northfield, Franklin County Agricultural Society.
 French, Benjamin V., Braintree, Norfolk County Agricultural Society.
 Hubbard, G. W., Hatfield, Hampshire, Franklin and Hampden Ag'l Society
 Lewis, William G., Framingham, Middlesex South Agricultural Society.
 Marston, George, Barnstable, Barnstable County Agricultural Society.
 Newell, Moses, West Newbury, Essex Agricultural Society.
 Page, J. H. W., Boston, Bristol County Agricultural Society.
 Parkhurst, Wm., Petersham, Worcester County West Agricultural Society.
 Phillips, Ivers, Fitchburg, Worcester North Agricultural Society.
 Sprague, Seth, Duxbury, Plymouth County Agricultural Society.
 Sweetser, Luke, Amherst, Hampshire Agricultural Society.
 Tower, Justus, Lanesborough, Berkshire Agricultural Society.
 Wilkinson, John, Great Barrington, Housatonic Agricultural Society.
 Winthrop, Robert C., Boston, Mass. Society for Promoting Agriculture.

Secretary, . . . Charles L. Flint.

1857.**Members Ex Officio.**

Henry J. Gardner, Governor.
 Henry W. Benchley, Lieutenant-Governor.
 Francis DeWitt, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Bull, Ephraim W., Concord.
 Grinnell, James S., Greenfield.
 Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Bartlett, John C., Chelmsford, Middlesex North Agricultural Society.
 Brewer, Francis, Springfield, Hampden Agricultural Society.
 Brooks, John, Princeton, Worcester Agricultural Society.
 Bushnell, Samuel H., Sheffield, Housatonic Agricultural Society.
 Chandler, Samuel, Lexington, Middlesex Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Durfee, Nathan, Fall River, Bristol County Agricultural Society.

Felton, Oliver C., Brookfield, Worcester South Agricultural Society.
 Field, Thomas J., Northfield, Franklin County Agricultural Society.
 Fisher, Jabez, Fitchburg, Worcester North Agricultural Society.
 French, Benjamin V., Braintree, Norfolk County Agricultural Society.
 Gardner, Edward W., Nantucket, Nantucket Agricultural Society.
 Hubbard, G. W., Hatfield, Hampshire, Franklin and Hampden Ag'l Society
 Lewis, William G., Framingham, Middlesex South Agricultural Society.
 Marston, George, Barnstable, Barnstable County Agricultural Society.
 Newell, Moses, West Newbury, Essex Agricultural Society.
 Sweetser, Luke, Amherst, Hampshire Agricultural Society.
 Tower, Justus, Lanesborough, Berkshire Agricultural Society.
 White, Josiah, Petersham, Worcester County West Agricultural Society.
 Winthrop, Robert C., Boston, Mass. Society for Promoting Agriculture.

Secretary, . . . Charles L. Flint .

1858.

Members Ex Officio.

Nathaniel P. Banks, Governor.
 Eliphalet Trask, Lieutenant-Governor.
 Oliver Warner, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Bull, Ephraim W., Concord.
 Grinnell, James S., Greenfield.
 Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Atwater, George M., Springfield, Hampden Agricultural Society.
 Bartlett, John C., Chelmsford, Middlesex North Agricultural Society.
 Brooks, John, Princeton, Worcester Agricultural Society.
 Brown, Simon, Concord, Middlesex Agricultural Society.
 Bushnell, Samuel H., Sheffield, Housatonic Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Durfee, Nathan, Fall River, Bristol County Agricultural Society.
 Fay, Richard S., Boston, Massachusetts Society for Promoting Agriculture.
 Felton, Oliver C., Brookfield, Worcester South Agricultural Society.
 Field, Thomas J., Northfield, Franklin County Agricultural Society.
 Fisher, Jabez, Fitchburg, Worcester North Agricultural Society.
 French, Benjamin V., Braintree, Norfolk County Agricultural Society.
 Gardner, Edward W., Nantucket, Nantucket Agricultural Society.
 Knox, Cyrus, Palmer, Eastern Hampden Agricultural Society.
 Lathrop, Paoli, S. Hadley, Hampshire, Franklin and Hampden Ag'l Society.
 Lewis, William G., Framingham, Middlesex South Agricultural Society.
 Marston, George, Barnstable, Barnstable County Agricultural Society.
 Newell, Moses, West Newbury, Essex Agricultural Society.
 Sweetser, Luke, Amherst, Hampshire Agricultural Society.

Tracy, Charles K., Hinsdale, Berkshire Agricultural Society.

White, Josiah, Petersham, Worcester County West Agricultural Society.

Secretary, . . . Charles L. Flint.

1859.

Members Ex Officio.

Nathaniel P. Banks, Governor.

Eliphalet Trask, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Bull, Ephraim W., Concord.

Clark, William S., Amherst.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Atwater, George M., Springfield, Hampden Agricultural Society.

Bartlett, John C., Chelmsford, Middlesex North Agricultural Society.

Brooks, John, Princeton, Worcester Agricultural Society.

Brown, Simon, Concord, Middlesex Agricultural Society.

Bushnell, Samuel H., Sheffield, Housatonic Agricultural Society.

Davis, Charles G., Plymouth, Plymouth County Agricultural Society.

Durfee, Nathan, Fall River, Bristol County Agricultural Society.

Fay, Richard S., Boston, Massachusetts Society for Promoting Agriculture.

Felton, Oliver C., Brookfield, Worcester South Agricultural Society.

Fisher, Jabez, Fitchburg, Worcester North Agricultural Society.

Gardner, Edward W., Nantucket, Nantucket Agricultural Society.

Grinnell, James S., Greenfield, Franklin County Agricultural Society.

Knox, Cyrus, Palmer, Eastern Hampden Agricultural Society.

Lathrop, Paoli, S. Hadley, Hampshire, Franklin and Hampden Ag'l Society.

Lewis, William G., Framingham, Middlesex South Agricultural Society.

Marston, George, Barnstable, Barnstable County Agricultural Society.

Sewall, Charles C., Medfield, Norfolk County Agricultural Society.

Stockbridge, Levi, Hadley, Hampshire Agricultural Society.

Sutton, William, Danvers, Essex Agricultural Society.

Tracy, Charles K., Hinsdale, Berkshire Agricultural Society.

White, Josiah, Petersham, Worcester County West Agricultural Society.

Secretary, . . . Charles L. Flint.

1860.

Members Ex Officio.

Nathaniel P. Banks, Governor.

Eliphalet Trask, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Bull, Ephraim W., Concord.
Clark, William S., Amherst.
Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Allen, Charles B., Tisbury, Martha's Vineyard Agricultural Society.
Atwater, George M., Springfield, Hampden Agricultural Society.
Bartlett, John C., Chelmsford, Middlesex North Agricultural Society.
Brooks, John, Princeton, Worcester Agricultural Society.
Brown, Simon, Concord, Middlesex Agricultural Society.
Bushnell, Samuel H., Sheffield, Housatonic Agricultural Society.
Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
Durfee, Nathan, Fall River, Bristol County Agricultural Society.
Fay, Richard S., Boston, Massachusetts Society for Promoting Agriculture.
Felton, Oliver C., Brookfield, Worcester South Agricultural Society.
Fisher, Jabez, Fitchburg, Worcester North Agricultural Society.
Gardner, Edward W., Nantucket, Nantucket Agricultural Society.
Grinnell, James S., Greenfield, Franklin County Agricultural Society.
Knox, Cyrus, Palmer, Eastern Hampden Agricultural Society.
Lathrop, Paoli, S. Hadley, Hampshire, Franklin and Hampden Ag'l Society.
Loring, George B., Salem, Essex Agricultural Society.
Marston, George, Barnstable, Barnstable County Agricultural Society.
Peters, Henry H., Southborough, Middlesex South Agricultural Society.
Sewall, Charles C., Medfield, Norfolk County Agricultural Society.
Smith, Matthew, Middlefield, Highland Agricultural Society.
Stockbridge, Levi, Hadley, Hampshire Agricultural Society.
Tracy, Charles K., Hinsdale, Berkshire Agricultural Society.
Walker, Freeman, North Brookfield, Worcester County West Ag'l Society.

Secretary, . . . Charles L. Flint.

1861.

Members Ex Officio.

John A. Andrew, Governor.
John Z. Goodrich, Lieutenant-Governor.
Oliver Warner, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Bull, Ephraim W., Concord.
Clark, William S., Amherst.
Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Allen, Charles B., Tisbury, Martha's Vineyard Agricultural Society.
Atwater, George M., Springfield, Hampden Agricultural Society.
Bartlett, John C., Chelmsford, Middlesex North Agricultural Society.

Brooks, John, Princeton, Worcester Agricultural Society.
 Bushnell, Samuel H., Sheffield, Housatonic Agricultural Society.
 Chapin, Henry, Milford, Worcester South-east Agricultural Society.
 Colt, Henry, Pittsfield, Berkshire Agricultural Society.
 Converse, Sherman, Monson, Eastern Hampden Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Durfee, Nathan, Fall River, Bristol County Agricultural Society.
 Fay, Richard S., Boston, Massachusetts Society for Promoting Agriculture.
 Felton, Oliver C., Brookfield, Worcester South Agricultural Society.
 Fisher, Jabez, Fitchburg, Worcester North Agricultural Society.
 Gardner, Edward W., Nantucket, Nantucket Agricultural Society.
 Grinnell, James S., Greenfield, Franklin County Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Marston, George, Barnstable, Barnstable County Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Peters, Henry H., Southborough, Middlesex South Agricultural Society.
 Sewall, Charles C., Medfield, Norfolk County Agricultural Society.
 Smith, Matthew, Middlefield, Highland Agricultural Society.
 Stebbins, Moses, Deerfield, Hampshire, Franklin and Hampden Ag'l Society.
 Stockbridge, Levi, Hadley, Hampshire Agricultural Society.
 Walker, Freeman, North Brookfield, Worcester County West Ag'l Society.
 White, Joseph, Williamstown, Hoosac Valley Agricultural Society.

Secretary, . . . Charles L. Flint.

1862.

Members Ex Officio.

John A. Andrew, Governor.

John Nesmith, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Bull, Ephraim W., Concord.

Lathrop, Paoli, South Hadley.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Brooks, John, Princeton, Worcester Agricultural Society.
 Bushnell, Samuel H., Sheffield, Housatonic Agricultural Society.
 Chapin, Henry, Milford, Worcester South-east Agricultural Society.
 Cleveland, Daniel A., Tisbury, Martha's Vineyard Agricultural Society.
 Clement, Asa, Dracut, Middlesex North Agricultural Society.
 Colt, Henry, Pittsfield, Berkshire Agricultural Society.
 Converse, Sherman, Monson, Eastern Hampden Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Durfee, Nathan, Fall River, Bristol County Agricultural Society.
 Fay, Richard S., Boston, Massachusetts Society for Promoting Agriculture.
 Fisher, Jabez, Fitchburg, Worcester North Agricultural Society.

Gardner, Edward W., Nantucket, Nantucket Agricultural Society.
 Grinnell, James S., Greenfield, Franklin County Agricultural Society.
 Hartwell, Samuel, Southbridge, Worcester South Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Peters, Henry H., Southborough, Middlesex South Agricultural Society.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Sewall, Charles C., Medfield, Norfolk County Agricultural Society.
 Smith, Matthew, Middlefield, Highland Agricultural Society.
 Stebbins, Moses, Deerfield, Hampshire, Franklin and Hampden Ag'l Society.
 Stedman, Phineas, Chicopee, Hampden Agricultural Society.
 Stockbridge, Levi, Hadley, Hampshire Agricultural Society.
 Walker, Freeman, North Brookfield, Worcester County West Ag'l Society.
 White, Joseph, Williamstown, Hoosac Valley Agricultural Society.

Secretary, . . . Charles L. Flint.

1863.

Members Ex Officio.

John A. Andrew, Governor.

Joel Hayden, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Bull, Ephraim W., Concord.

Lathrop, Paoli, South Hadley.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Adams, Abel F., Fitchburg, Worcester North Agricultural Society.
 Brooks, John, Princeton, Worcester Agricultural Society.
 Bushnell, Samuel H., Sheffield, Housatonic Agricultural Society.
 Chapin, Henry, Milford, Worcester South-east Agricultural Society.
 Cleaveland, Daniel A., Tisbury, Martha's Vineyard Agricultural Society.
 Clement, Asa, Dracut, Middlesex North Agricultural Society.
 Colt, Henry, Pittsfield, Berkshire Agricultural Society.
 Converse, Sherman, Monson, Eastern Hampden Agricultural Society.
 Crocker, Samuel L., Taunton, Bristol County Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Grout, Elias, Ashland, Middlesex South Agricultural Society.
 Hartwell, Samuel, Southbridge, Worcester South Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Motley, Thos., Jr., Jamaica Plain, Mass. Society for Promoting Agriculture.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Sewall, Charles C., Medfield, Norfolk County Agricultural Society.
 Smith, Matthew, Middlefield, Highland Agricultural Society.
 Stebbins, Edward W., Deerfield, Franklin County Agricultural Society.

Stebbins, Moses, Deerfield, Hampshire, Franklin and Hampden Ag'l Society.
 Stedman, Phineas, Chicopee, Hampden Agricultural Society.
 Stockbridge, Levi, Hadley, Hampshire Agricultural Society.
 Thompson, James, Nantucket, Nantucket Agricultural Society.
 Tidd, Hollis, New Braintree, Worcester County West Agricultural Society.
 White, Joseph, Williamstown, Hoosac Valley Agricultural Society.

Secretary, . . . Charles L. Flint.

1864.

Members Ex Officio.

John A. Andrew, Governor.

Joel Hayden, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Agassiz, Louis, Cambridge.

Bull, Ephraim W., Concord.

Lathrop, Paoli, South Hadley.

Members chosen by the Societies.

Adams, Abel F., Fitchburg, Worcester North Agricultural Society.
 Cleaveland, Daniel A., Tisbury, Martha's Vineyard Agricultural Society.
 Clement, Asa, Dracut, Middlesex North Agricultural Society.
 Crocker, Samuel L., Taunton, Bristol County Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Garfield, Harrison, Lee, Housatonic Agricultural Society.
 Grout, Elias, Ashland, Middlesex South Agricultural Society.
 Hartwell, Samuel, Southbridge, Worcester South Agricultural Society.
 Homer, Alured, Brimfield, Eastern Hampden Agricultural Society.
 Huntington, T. G., Hadley, Hampshire, Franklin and Hampden Ag'l Society.
 Johnson, Sylvander, Adams, Hoosac Valley Agricultural Society.
 Keith, Henry R., Grafton, Worcester Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Perkins, Charles O., Becket, Berkshire Agricultural Society.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Saltonstall, Leverett, Newton, Mass. Society for Promoting Agriculture.
 Sewall, Charles C., Medfield, Norfolk County Agricultural Society.
 Smith, Matthew, Middlefield, Highland Agricultural Society.
 Stebbins, Edward W., Deerfield, Franklin County Agricultural Society.
 Stedman, Phineas, Chicopee, Hampden Agricultural Society.
 Stockbridge, Levi, Hadley, Hampshire Agricultural Society.
 Thompson, James, Nantucket, Nantucket Agricultural Society.
 Tidd, Hollis, New Braintree, Worcester County West Agricultural Society.
 Wood, Perry, Mendon, Worcester South-east Agricultural Society.

Secretary, . . . Charles L. Flint.

1865.

Members Ex Officio.

John A. Andrew, Governor.

Joel Hayden, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

Members appointed by the Governor and Council.

Agassiz, Louis, Cambridge.

Bull, Ephraim W., Concord.

Chadbourne, Paul A., Williamstown.

Members chosen by the Societies.

Adams, Abel F., Fitchburg, Worcester North Agricultural Society.

Cleaveland, Daniel A., Tisbury, Martha's Vineyard Agricultural Society.

Clement, Asa, Dracut, Middlesex North Agricultural Society.

Crocker, Samuel L., Taunton, Bristol County Agricultural Society.

Davis, Charles G., Plymouth, Plymouth County Agricultural Society.

Garfield, Harrison, Lee, Housatonic Agricultural Society.

Grout, Elias, Ashland, Middlesex South Agricultural Society.

Homer, Alured, Brimfield, Eastern Hampden Agricultural Society.

Hubbard, Newton S., Brimfield, Worcester South Agricultural Society.

Huntington, T. G., Hadley, Hampshire, Franklin and Hampden Ag'l Society.

Johnson, Sylvander, Adams, Hoosac Valley Agricultural Society.

Keith, Henry R., Grafton, Worcester Agricultural Society.

Kenrick, John, Orleans, Barnstable County Agricultural Society.

Loring, George B., Salem, Essex Agricultural Society.

Moore, John B., Concord, Middlesex Agricultural Society.

Perkins, Charles O., Becket, Berkshire Agricultural Society.

Saltonstall, Leverett, Newton, Mass. Society for Promoting Agriculture.

Sewall, Charles C., Medfield, Norfolk County Agricultural Society.

Smith, John M., Sunderland, Franklin County Agricultural Society.

Smith, Matthew, Middlefield, Highland Agricultural Society.

Stedman, Phineas, Chicopee, Hampden Agricultural Society.

Stockbridge, Levi, Hadley, Hampshire Agricultural Society.

Taft, Velorous, Upton, Worcester South-east Agricultural Society.

Thompson, James, Nantucket, Nantucket Agricultural Society.

Tidd, Hollis, New Braintree, Worcester County West Agricultural Society.

Secretary, . . . Charles L. Flint.

1866.

Members Ex Officio.

Alexander H. Bullock, Governor.

William Claffin, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

Henry F. French, President Massachusetts Agricultural College.

Members appointed by the Governor and Council.

Agassiz, Louis, Cambridge.
 Bull, Ephraim W., Concord.
 Chadbourne, Paul A., Williamstown.

Members chosen by the Societies.

Billings, Thomas, Lunenburg, Worcester North Agricultural Society.
 Cleaveland, Daniel A., Tisbury, Martha's Vineyard Agricultural Society.
 Clement, Asa, Dracut, Middlesex North Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Garfield, Harrison, Lee, Housatonic Agricultural Society.
 Homer, Alured, Brimfield, Eastern Hampden Agricultural Society.
 Hubbard, Newton S., Brimfield, Worcester South Agricultural Society.
 Huntington, T. G., Hadley, Hampshire, Franklin and Hampden Ag'l Society.
 Johnson, John, Jr., Framingham, Middlesex South Agricultural Society.
 Johnson, Sylvander, Adams, Hoosac Valley Agricultural Society.
 Kenrick, John, Orleans, Barnstable County Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Perkins, Charles O., Becket, Berkshire Agricultural Society.
 Saltonstall, Leverett, Newton, Mass. Society for Promoting Agriculture.
 Sanderson, Courtland, Phillipston, Worcester County West Ag'l Society.
 Sewall, Charles C., Medfield, Norfolk County Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Smith, John M., Sunderland, Franklin County Agricultural Society.
 Stedman, Phineas, Chicopee, Hampden Agricultural Society.
 Stockbridge, Levi, Hadley, Hampshire Agricultural Society.
 Taft, Velorous, Upton, Worcester South-east Agricultural Society.
 Thompson, James, Nantucket, Nantucket Agricultural Society.
 Ward, Thomas W., Shrewsbury, Worcester Agricultural Society.
 Watkins, Monroe F., Hinsdale, Highland Agricultural Society

Secretary, . . . Charles L. Flint.

1867.

Members Ex Officio.

Alexander H. Bullock, Governor.
 William Claflin, Lieutenant-Governor.
 Oliver Warner, Secretary of the Commonwealth.
 Paul A. Chadbourne, President Massachusetts Agricultural College.

Members appointed by the Governor and Council.

Agassiz, Louis, Cambridge.
 Bull, Ephraim W., Concord.
 Clark, William S., Amherst.

Members chosen by the Societies.

Billings, Thomas, Lunenburg, Worcester North Agricultural Society.
 Birnie, William, Springfield, Hampden Agricultural Society.
 Cleaveland, Daniel A., Tisbury, Martha's Vineyard Agricultural Society.
 Clement, Asa, Dracut, Middlesex North Agricultural Society.
 Cole, John L., Williamstown, Hoosac Valley Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Durfee, Nathan, Fall River, Bristol Central Agricultural Society.
 Hubbard, Newton S., Brimfield, Worcester South Agricultural Society.
 Hyde, Alexander, Lee, Berkshire Agricultural Society.
 Johnson, John, Jr., Framingham, Middlesex South Agricultural Society.
 King, George A., Barnstable, Barnstable County Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Porter, H. S., Hatfield, Hampshire, Franklin and Hampden Ag'l Society. •
 Saltonstall, Leverett, Newton, Mass. Society for Promoting Agriculture.
 Sanderson, Courtland, Phillipston, Worcester County West Ag'l Society. •
 Sewall, Charles C., Medfield, Norfolk County Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Smith, John M., Sunderland, Franklin County Agricultural Society.
 Stockbridge, Levi, Hadley, Hampshire Agricultural Society.
 Thatcher, T. D., Lee, Housatonic Agricultural Society.
 Thompson, James, Nantucket, Nantucket Agricultural Society.
 Ward, H. S., Monson, Eastern Hampden Agricultural Society.
 Ward, Thomas W., Shrewsbury, Worcester Agricultural Society.
 Watkins, Monroe F., Hinsdale, Highland Agricultural Society.

Secretary, . . . Charles L. Flint.

1868.

Members Ex Officio.

Alexander H. Bullock, Governor.
 William Claflin, Lieutenant-Governor.
 Oliver Warner, Secretary of the Commonwealth.
 William S. Clark, President Massachusetts Agricultural College.

Members appointed by the Governor and Council.

Agassiz, Louis, Cambridge.
 Bull, Ephraim W., Concord.
 Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.
 Bassett, Chas. C., Athol, Worcester North-west Ag'l and Mechanical Society.
 Billings, Thomas, Lunenburg, Worcester North Agricultural Society.

Birnie, William, Springfield, Hampden Agricultural Society.
 Boise, E. W., Blandford, Union Agricultural and Horticultural Society.
 Brown, Imla K., Bernardston, Franklin County Agricultural Society.
 Clement, Asa, Dracut, Middlesex North Agricultural Society.
 Cole, John L., Williamstown, Hoosac Valley Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Durfee, Nathan, Fall River, Bristol Central Agricultural Society.
 Fearing, Albert, Hingham, Hingham Agricultural and Horticultural Society.
 Hubbard, Newton S., Brimfield, Worcester South Agricultural Society.
 Hyde, Alexander, Lee, Berkshire Agricultural Society.
 Johnson, John, Jr., Framingham, Middlesex South Agricultural Society.
 King, George A., Barnstable, Barnstable County Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Morton, John A., Hadley, Hampshire Agricultural Society.
 Pierce, John, Edgartown, Martha's Vineyard Agricultural Society.
 Porter, H. S., Hatfield, Hampshire, Franklin and Hampden Ag'l Society.
 Saltonstall, Leverett, Newton, Mass. Society for Promoting Agriculture.
 Sanderson, Courtland, Phillipston, Worcester County West Ag'l Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Stone, Eliphalet, Dedham, Norfolk County Agricultural Society.
 Thatcher, T. D., Lee, Housatonic Agricultural Society.
 Thompson, James, Nantucket, Nantucket Agricultural Society.
 Ward, H. S., Monson, Eastern Hampden Agricultural Society.
 Ward, Thomas W., Shrewsbury, Worcester Agricultural Society.
 Watkins, Monroe F., Hinsdale, Highland Agricultural Society.

Secretary, . . . Charles L. Flint.

1869.

Members Ex Officio.

William Claffin, Governor.

Joseph Tucker, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

William S. Clark, President Massachusetts Agricultural College.

Members appointed by the Governor and Council.

Agassiz, Louis, Cambridge.

Hyde, James F. C., Newton.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.

Bassett, Chas. C., Athol, Worcester North-west Ag'l and Mechanical Society.

Birnie, William, Springfield, Hampden Agricultural Society.

Blair, James S., Brimfield, Eastern Hampden Agricultural Society.

Boise, E. W., Blandford, Union Agricultural and Horticultural Society.
 Bradford, Lewis H., Fitchburg, Worcester North Agricultural Society.
 Brown, Imla K., Bernardston, Franklin County Agricultural Society.
 Clement, Asa, Dracut, Middlesex North Agricultural Society.
 Cole, John L., Williamstown, Hoosac Valley Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Durfee, Nathan, Fall River, Bristol Central Agricultural Society.
 Ellsworth, John T., Barre, Worcester County West Agricultural Society.
 Fearing, Albert, Hingham, Hingham Agricultural and Horticultural Society.
 Hubbard, Newton S., Brimfield, Worcester South Agricultural Society.
 Hyde, Alexander, Lee, Berkshire Agricultural Society.
 Johnson, John, Jr., Framingham, Middlesex South Agricultural Society.
 King, George A., Barnstable, Barnstable County Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Morton, John A., Hadley, Hampshire Agricultural Society.
 Pierce, John, Edgartown, Martha's Vineyard Agricultural Society.
 Plunkett, George T., Hinsdale, Highland Agricultural Society.
 Porter, H. S., Hatfield, Hampshire, Franklin and Hampden Ag'l Society.
 Saltonstall, Leverett, Newton, Mass. Society for Promoting Agriculture.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Stone, Eliphalet, Dedham, Norfolk County Agricultural Society.
 Thatcher, T. D., Lee, Housatonic Agricultural Society.
 Thompson, James, Nantucket, Nantucket Agricultural Society.
 Ward, Thomas W., Shrewsbury, Worcester Agricultural Society.

Secretary, . . . Charles L. Flint.

1870.

Members Ex Officio.

William Claflin, Governor.

Joseph Tucker, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

William S. Clark, President Massachusetts Agricultural College.

Members appointed by the Governor and Council.

Agassiz, Louis, Cambridge.

Hyde, James F. C., Newton.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.
 Bassett, Chas. C., Athol, Worcester North-west Ag'l and Mechanical Society.
 Birnie, William, Springfield, Hampden Agricultural Society.
 Boise, E. W., Blandford, Union Agricultural and Horticultural Society.
 Bradford, Lewis H., Fitchburg, Worcester North Agricultural Society.

Brown, Imla K., Bernardston, Franklin County Agricultural Society.
 Brown, Nahum P., Florida, Hoosac Valley Agricultural Society.
 Bucklin, Andrew J., Adams, Berkshire Agricultural Society.
 Clement, Asa, Dracut, Middlesex North Agricultural Society.
 Converse, Hiram, Palmer, Eastern Hampden Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Durfee, Nathan, Fall River, Bristol Central Agricultural Society.
 Ellsworth, John T., Barre, Worcester County West Agricultural Society.
 Fearing, Albert, Hingham, Hingham Agricultural and Horticultural Society.
 Goodman, Richard, Lenox, Housatonic Agricultural Society.
 Hubbard, Newton S., Brimfield, Worcester South Agricultural Society
 Johnson, John, Framingham, Middlesex South Agricultural Society.
 King, George A., Barnstable, Barnstable County Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Morton, John A., Hadley, Hampshire Agricultural Society.
 Peck, A. P., Northampton, Hampshire, Franklin and Hampden Ag'l Society.
 Pierce, John, Edgartown, Martha's Vineyard Agricultural Society.
 Plunkett, George T., Hinsdale, Highland Agricultural Society.
 Saltonstall, Leverett, Newton, Mass. Society for Promoting Agriculture.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Stone, Eliphalet, Dedham, Norfolk County Agricultural Society.
 Thompson, James, Nantucket, Nantucket Agricultural Society.
 Ward, Thomas W., Shrewsbury, Worcester Agricultural Society.

Secretary, . . . Charles L. Flint.

1871.

Members Ex Officio.

William Claflin, Governor.

Joseph Tucker, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

William S. Clark, President Massachusetts Agricultural College.

Members appointed by the Governor and Council.

Agassiz, Louis, Cambridge.

Hyde, James F. C., Newton.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Allis, Thomas L., Conway, Franklin County Agricultural Society.
 Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.
 Birnie, William, Springfield, Hampden Agricultural Society.
 Boise, E. W., Blandford, Union Agricultural and Horticultural Society.
 Bradford, Lewis H., Fitchburg, Worcester North Agricultural Society.
 Brown, Nahum P., Florida, Hoosac Valley Agricultural Society.

Bucklin, Andrew J., Adams, Berkshire Agricultural Society.
 Converse, Hiram, Palmer, Eastern Hampden Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Durfee, Nathan, Fall River, Bristol Central Agricultural Society.
 Ellsworth, John T., Barre, Worcester County West Agricultural Society.
 Fay, Farwell F., Athol, Worcester North-west Ag'l and Mechanical Society.
 Fearing, Albert, Hingham, Hingham Agricultural and Horticultural Society.
 Goodman, Richard, Lenox, Housatonic Agricultural Society.
 Hubbard, Newton S., Brimfield, Worcester South Agricultural Society.
 Johnson, John, Framingham, Middlesex South Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Ladd, Jonathan, Lowell, Middlesex North Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Myrick, Andrew M., Nantucket, Nantucket Agricultural Society.
 Peck, A. P., Northampton, Hampshire, Franklin and Hampden Ag'l Society.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Plunkett, George T., Hinsdale, Highland Agricultural Society.
 Saltonstall, Leverett, Newton, Mass. Society for Promoting Agriculture.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Stockbridge, Levi, Amherst, Hampshire Agricultural Society.
 Stone, Eliphalet, Dedham, Norfolk County Agricultural Society.
 Vincent, Herman, Chilmark, Martha's Vineyard Agricultural Society.
 Ward, Thomas W., Shrewsbury, Worcester Agricultural Society.

Secretary, . . . Charles L. Flint.

1872.

Members Ex Officio.

William B. Washburn, Governor.

Joseph Tucker, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

William S. Clark, President Massachusetts Agricultural College.

Members appointed by the Governor and Council.

Agassiz, Louis, Cambridge.

Hyde, James F. C., Newton.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Allis, Thomas L., Conway, Franklin County Agricultural Society.

Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.

Birnie, William, Springfield, Hampden Agricultural Society.

Boise, E. W., Blandford, Union Agricultural and Horticultural Society.

Brown, Nahum P., North Adams, Hoosac Valley Agricultural Society.

Bucklin, Andrew J., Adams, Berkshire Agricultural Society.

Converse, Hiram, Palmer, Eastern Hampden Agricultural Society.

Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Durfee, Nathan, Fall River, Bristol Central Agricultural Society.
 Fay, Farwell F., Athol, Worcester North-west Ag'l and Mechanical Society.
 Fearing, Albert, Hingham, Hingham Agricultural and Horticultural Society.
 Goodman, Richard, Lenox, Housatonic Agricultural Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Hubbard, Newton S., Brimfield, Worcester South Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Ladd, Jonathan, Lowell, Middlesex North Agricultural Society.
 Leavitt, Roger H., Charlemont, Deerfield Valley Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 McElwain, Jonathan, Middlefield, Highland Agricultural Society.
 Miles, Eugene T., Fitchburg, Worcester North Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Myrick, Andrew M., Nantucket, Nantucket Agricultural Society.
 Peck, A. P., Northampton, Hampshire, Franklin and Hampden Ag'l Society.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Root, Thomas P., Barre, Worcester County West Agricultural Society.
 Saltonstall, Leverett, Newton, Mass. Society for Promoting Agriculture.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Stockbridge, Levi, Amherst, Hampshire Agricultural Society.
 Stone, Eliphalet, Dedham, Norfolk County Agricultural Society.
 Sturtevant, J. N., South Framingham, Middlesex South Agricultural Society.
 Vincent, Herman, Chilmark, Martha's Vineyard Agricultural Society.

Secretary, . . . Charles L. Flint.

1873.

Members Ex Officio.

William B. Washburn, Governor.

Thomas Talbot, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

William S. Clark, President Massachusetts Agricultural College.

Members appointed by the Governor and Council.

Agassiz, Louis, Cambridge.

Hyde, James F. C., Newton.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Allis, Thomas L., Conway, Franklin County Agricultural Society.

Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.

Boise, E. W., Blandford, Union Agricultural and Horticultural Society.

Cole, John M., Williamstown, Hoosac Valley Agricultural Society.

Davis, Charles G., Plymouth, Plymouth County Agricultural Society.

Fay, Farwell F., Athol, Worcester North-west Ag'l and Mechanical Society.

Fearing, Albert, Hingham, Hingham Agricultural and Horticultural Society.

Goodale, Henry S., Mount Washington, Housatonic Agricultural Society.
 Graves, E., Williamsburg, Hampshire, Franklin and Hampden Ag'l Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Hawes, John A., Fairhaven, Bristol Central Agricultural Society.
 Hubbard, Newton S., Brimfield, Worcester South Agricultural Society.
 Kellogg, Ensign H., Pittsfield, Berkshire Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Ladd, Jonathan, Lowell, Middlesex North Agricultural Society.
 Leavitt, Roger H., Charlemont, Deerfield Valley Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 McElwain, Jonathan, Middlefield, Highland Agricultural Society.
 Miles, Eugene T., Fitchburg, Worcester North Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Myrick, Andrew M., Nantucket, Nantucket Agricultural Society.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Root, Thomas P., Barre, Worcester County West Agricultural Society.
 Sargent, Charles S., Brookline, Mass. Society for Promoting Agriculture.
 Sessions, Horace M., Wilbraham, Hampden Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Stockbridge, Levi, Amherst, Hampshire Agricultural Society.
 Stone, Eliphalet, Dedham, Norfolk County Agricultural Society.
 Sturtevant, J. N., South Framingham, Middlesex South Agricultural Society.
 Vincent, Herman, Chilmark, Martha's Vineyard Agricultural Society.
 Wakefield, Horace P., Monson, Eastern Hampden Agricultural Society.

Secretary, . . . Charles L. Flint.

1874.

Members Ex Officio.

William B. Washburn, Governor.
 Thomas Talbot, Lieutenant-Governor.
 Oliver Warner, Secretary of the Commonwealth.
 William S. Clark, President Massachusetts Agricultural College.
 Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Chadbourne, Paul A., Williamstown.
 Hyde, James F. C., Newton.
 Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.
 Cole, John M., Williamstown, Hoosac Valley Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Dwight, Daniel, Dudley, Worcester South Agricultural Society.
 Fearing, Albert, Hingham, Hingham Agricultural and Horticultural Society.
 Goodale, Henry S., Mount Washington, Housatonic Agricultural Society.

Graves, E., Williamsburg, Hampshire, Franklin and Hampden Ag'l Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Hawes, John A., Fairhaven, Bristol Central Agricultural Society.
 Kellogg, Ensign H., Pittsfield, Berkshire Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Knox, Franklin C., Blandford, Union Agricultural and Horticultural Society.
 Ladd, Jonathan, Lowell, Middlesex North Agricultural Society.
 Leavitt, Roger H., Charlemont, Deerfield Valley Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 McElwain, Jonathan, Middlefield, Highland Agricultural Society.
 Miles, Eugene T., Fitchburg, Worcester North Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Myrick, Andrew M., Nantucket, Nantucket Agricultural Society.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Root, Thomas P., Barre, Worcester County West Agricultural Society.
 Sanderson, C., Phillipston, Worcester North-west Ag'l and Mechan'l Society.
 Sargent, Charles S., Brookline, Mass. Society for Promoting Agriculture.
 Sessions, Horace M., Wilbraham, Hampden Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Stone, Eliphalet, Dedham, Norfolk County Agricultural Society.
 Sturtevant, J. N., South Framingham, Middlesex South Agricultural Society.
 Vincent, Hebron, Edgartown, Martha's Vineyard Agricultural Society.
 Wakefield, Horace P., Monson, Eastern Hampden Agricultural Society.
 Warner, Levi P., Sunderland, Hampshire Agricultural Society.
 Warner, Whitney L., Sunderland, Franklin County Agricultural Society.

Secretary, . . . Charles L. Flint.

1875.

Members Ex Officio.

William Gaston, Governor.

Horatio G. Knight, Lieutenant-Governor.

Oliver Warner, Secretary of the Commonwealth.

William S. Clark, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Chadbourne, Paul A., Williamstown.

Saltonstall, Leverett, Newton.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.
 Bennett, Edmund H., Taunton, Bristol County Agricultural Society.
 Cole, John M., Williamstown, Hoosac Valley Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Dwight, Daniel, Dudley, Worcester South Agricultural Society.

Fearing, Albert, Hingham, Hingham Agricultural and Horticultural Society.
 Goodale, Henry S., Mount Washington, Housatonic Agricultural Society.
 Graves, E., Williamsburg, Hampshire, Franklin and Hampden Ag'l Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Hawes, John A., Fairhaven, Bristol Central Agricultural Society.
 Hawks, E. C., Charlemont, Deerfield Valley Agricultural Society.
 Holland, Addison H., Barre, Worcester County West Agricultural Society.
 Kellogg, Ensign H., Pittsfield, Berkshire Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Knox, Franklin C., Blandford, Union Agricultural and Horticultural Society.
 Ladd, Jonathan, Lowell, Middlesex North Agricultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Myrick, Andrew M., Nantucket, Nantucket Agricultural Society.
 Perry, Elijah, Natick, Middlesex South Agricultural Society.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Sanderson, C., Phillipston, Worcester North-west Ag'l and Mechan'l Society.
 Sargent, Charles S., Brookline, Mass. Society for Promoting Agriculture.
 Sessions, Horace M., Wilbraham, Hampden Agricultural Society.
 Shepley, Stephen, Fitchburg, Worcester North Agricultural Society.
 Smith, Metcalf J., Middlefield, Highland Agricultural Society.
 Stone, Eliphalet, Dedham, Norfolk County Agricultural Society.
 Vincent, Hebron, Edgartown, Martha's Vineyard Agricultural Society.
 Wakefield, Horace P., Monson, Eastern Hampden Agricultural Society.
 Warner, Levi P., Sunderland, Hampshire Agricultural Society.
 Warner, Whitney L., Sunderland, Franklin County Agricultural Society.

Secretary, . . . Charles L. Flint.

1876.

Members Ex Officio.

Alexander H. Rice, Governor.
 Horatio G. Knight, Lieutenant-Governor.
 Henry B. Peirce, Secretary of the Commonwealth.
 William S. Clark, President Massachusetts Agricultural College.
 Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Chadbourne, Paul A., Williamstown.
 Saltonstall, Leverett, Newton.
 Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Bagg, J. N., West Springfield, Hampden Agricultural Society.
 Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.
 Bennett, Edmund H., Taunton, Bristol County Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.

Dwight, Daniel, Dudley, Worcester South Agricultural Society.
 Fenn, Daniel B., Stockbridge, Housatonic Agricultural Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Hawes, John A., Fairhaven, Bristol Central Agricultural Society.
 Hawks, E. C., Charlemont, Deerfield Valley Agricultural Society.
 Holland, Addison H., Barre, Worcester County West Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Knox, Franklin C., Blandford, Union Agricultural and Horticultural Society.
 Ladd, Jonathan, Lowell, Middlesex North Agricultural Society.
 Lincoln, Solomon, Hingham, Hingham Ag'l and Horticultural Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Macy, Alexander, Jr., Nantucket, Nantucket Agricultural Society.
 Merrill, John E., Pittsfield, Berkshire Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Perry, Elijah, Natick, Middlesex South Agricultural Society.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Sanderson, C., Phillipston, Worcester North-west Ag'l and Mechan'l Society.
 Sargent, Charles S., Brookline, Mass. Society for Promoting Agriculture.
 Shepley, Stephen, Fitchburg, Worcester North Agricultural Society.
 Smith, Metcalf J., Middlefield, Highland Agricultural Society.
 Smith, M. J., Northampton, Hampshire, Franklin and Hampden Ag'l Society.
 Stone, Eliphalet, Dedham, Norfolk County Agricultural Society.
 Vincent, Hebron, Edgartown, Martha's Vineyard Agricultural Society.
 Wakefield, Horace P., Monson, Eastern Hampden Agricultural Society.
 Warner, Levi P., Sunderland, Hampshire Agricultural Society.
 Warner, Whitney L., Sunderland, Franklin County Agricultural Society.

Secretary, . . . Charles L. Flint.

1877.

Members Ex Officio.

Alexander H. Rice, Governor.

Horatio G. Knight, Lieutenant-Governor.

Henry B. Peirce, Secretary of the Commonwealth.

William S. Clark, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Chadbourne, Paul A., Williamstown.

Saltonstall, Leverett, Newton.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Bagg, J. N., West Springfield, Hampden Agricultural Society.

Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.

Bennett, Edmund H., Taunton, Bristol County Agricultural Society.

Burnap, James T., Dunstable, Middlesex North Agricultural Society.

Comins, Henry C., Hadley, Hampshire Agricultural Society.
 Davis, Charles G., Plymouth, Plymouth County Agricultural Society.
 Fenn, Daniel B., Stockbridge, Housatonic Agricultural Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Hawes, John A., Fairhaven, Bristol Central Agricultural Society.
 Hawks, E. C., Charlemont, Deerfield Valley Agricultural Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Holland, Addison H., Barre, Worcester County West Agricultural Society.
 Johnson, William E., Williamstown, Hoosac Valley Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Knox, Franklin C., Blandford, Union Agricultural and Horticultural Society.
 Lewis, Enoch T., Athol, Worcester North-west Ag'l and Mechanical Society.
 Loring, George B., Salem, Essex Agricultural Society.
 Macy, Alexander, Jr., Nantucket, Nantucket Agricultural Society.
 Merrill, John E., Pittsfield, Berkshire Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Perry, Elijah, Natick, Middlesex South Agricultural Society.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Russell, Henry S., Milton, Norfolk County Agricultural Society.
 Sargent, Charles S., Brookline, Mass. Society for Promoting Agriculture.
 Shepley, Stephen, Fitchburg, Worcester North Agricultural Society.
 Smith, Arthur A., Colrain, Franklin County Agricultural Society.
 Smith, Metcalf J., Middlefield, Highland Agricultural Society.
 Smith, M. J., Northampton, Hampshire, Franklin and Hampden Ag'l Society.
 Upham, Nathaniel, Sturbridge, Worcester South Agricultural Society.
 Vincent, Hebron, Edgartown, Martha's Vineyard Agricultural Society.
 Wakefield, Horace P., Monson, Eastern Hampden Agricultural Society.

Secretary, . . . Charles L. Flint.

1878.

Members Ex Officio.

Alexander H. Rice, Governor.
 Horatio G. Knight, Lieutenant-Governor.
 Henry B. Peirce, Secretary of the Commonwealth.
 William S. Clark, President Massachusetts Agricultural College.
 Charles A. Goessmann, Chemist of the Board.



Members appointed by the Governor and Council.

Chadbourne, Paul A., Williamstown.
 Grinnell, James S., Greenfield.
 Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Abbott, Abiel K., Chester, Highland Agricultural Society.
 Bagg, J. N., West Springfield, Hampden Agricultural Society.
 Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.

Brown, John F., Lunenburg, Worcester North Agricultural Society.
 Comins, Henry C., Hadley, Hampshire Agricultural Society.
 Damon, Thomas J., Wayland, Middlesex South Agricultural Society.
 Davenport, Otis J., Colrain, Deerfield Valley Agricultural Society.
 Fenn, Daniel B., Stockbridge, Housatonic Agricultural Society.
 Goodwin, John A., Lowell, Middlesex North Agricultural Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Hawes, John A., Fairhaven, Bristol Central Agricultural Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Johnson, William E., Williamstown, Hoosac Valley Agricultural Society.
 Knowlton, William, Upton, Worcester South-east Agricultural Society.
 Knox, Franklin C., Blandford, Union Agricultural and Horticultural Society.
 Lane, John, East Bridgewater, Plymouth County Agricultural Society.
 Lewis, Enoch T., Athol, Worcester North-west Ag'l and Mechanical Society.
 Macy, Alexander, Jr., Nantucket, Nantucket Agricultural Society.
 Merrill, John E., Pittsfield, Berkshire Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Russell, Henry S., Milton, Norfolk County Agricultural Society.
 Sargent, Charles S., Brookline, Mass. Society for Promoting Agriculture.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Smith, Arthur A., Colrain, Franklin County Agricultural Society.
 Smith, M. J., Northampton, Hampshire, Franklin and Hampden Ag'l Society.
 Upham, Nathaniel, Sturbridge, Worcester South Agricultural Society.
 Vincent, Hebron, Edgartown, Martha's Vineyard Agricultural Society.
 Wakefield, Horace P., Palmer, Eastern Hampden Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Warner, William A., Hardwick, Worcester County West Ag'l Society.

Secretary, . . . Charles L. Flint.

1879.

Members Ex Officio.

Thomas Talbot, Governor.

John D. Long, Lieutenant-Governor.

Henry B. Peirce, Secretary of the Commonwealth.

William S. Clark, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Grinnell, James S., Greenfield.

Nichols, James R., Haverhill.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Abbott, Abiel K., Chester, Highland Agricultural Society.

Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.

Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.
 Brown, John F., Lunenburg, Worcester North Agricultural Society.
 Comins, Henry C., Hadley, Hampshire Agricultural Society.
 Damon, Thomas J., Wayland, Middlesex South Agricultural Society.
 Davenport, Otis J., Colrain, Deerfield Valley Agricultural Society.
 Demond, J. H., Northampton, Hampshire, Franklin & Hampden Ag'l Society.
 Goodwin, John A., Lowell, Middlesex North Agricultural Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Knox, Franklin C., Blandford, Union Agricultural and Horticultural Society.
 Lane, John, East Bridgewater, Plymouth County Agricultural Society.
 Lewis, Enoch T., Athol, Worcester North-west Ag'l and Mechanical Society.
 Macy, Alexander, Jr., Nantucket, Nantucket Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Phinney, S. B., Barnstable, Barnstable County Agricultural Society.
 Pierson, Henry M., Pittsfield, Berkshire Agricultural Society.
 Russell, Henry S., Milton, Norfolk County Agricultural Society.
 Sessions, William R., Hampden, Hampden Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Smith, Arthur A., Colrain, Franklin County Agricultural Society.
 Taft, Velorous, Upton, Worcester South-east Agricultural Society.
 Upham, Nathaniel, Sturbridge, Worcester South Agricultural Society.
 Vincent, Hebron, Edgartown, Martha's Vineyard Agricultural Society.
 Wakefield, Horace P., Palmer, Eastern Hampden Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Warner, William A., Hardwick, Worcester County West Ag'l Society.
 Wheeler, Merritt I., Great Barrington, Housatonic Agricultural Society.

Secretary, . . . Charles L. Flint.

1880.

Members Ex Officio.

John D. Long, Governor.

Byron Weston, Lieutenant-Governor.

Henry B. Peirce, Secretary of the Commonwealth.

Charles L. Flint, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Grinnell, James S., Greenfield.

Nichols, James R., Haverhill.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Abbott, Abiel K., Chester, Highland Agricultural Society.

Anderson, John S., Shelburne, Franklin County Agricultural Society.

Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.

Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.
 Brown, John F., Lunenburg, Worcester North Agricultural Society.
 Damon, Thomas J., Wayland, Middlesex South Agricultural Society.
 Davenport, Otis J., Colrain, Deerfield Valley Agricultural Society.
 Demond, J. H., Northampton, Hampshire, Franklin & Hampden Ag'l Society.
 Gaylord, Flavel, Amherst, Hampshire Agricultural Society.
 Gleason, Samuel N., Warren, Worcester South Agricultural Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Herrick, Henry K., Blandford, Union Agricultural and Horticultural Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Lane, John, East Bridgewater, Plymouth County Agricultural Society.
 Lynde, J. P., Athol, Worcester North-west Ag'l and Mechanical Society.
 Macy, Alexander, Jr., Nantucket, Nantucket Agricultural Society.
 Mayhew, David, Tisbury, Martha's Vineyard Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Perkins, Augustus T., Mashpee, Barnstable County Agricultural Society.
 Pierson, Henry M., Pittsfield, Berkshire Agricultural Society.
 Preston, A. W., North Adams, Hoosac Valley Agricultural Society.
 Sessions, William R., Hampden, Hampden Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Taft, Velorous, Upton, Worcester South-east Agricultural Society.
 Varnum, A. C., Lowell, Middlesex North Agricultural Society.
 Wakefield, Horace P., Leicester, Eastern Hampden Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Warner, Wm. A., Hardwick, Worcester County West Agricultural Society.
 Wheeler, Merritt I., Great Barrington, Housatonic Agricultural Society.

Secretary, . . . John E. Russell.

1881.

Members Ex Officio.

John D. Long, Governor.

Byron Weston, Lieutenant-Governor.

Henry B. Peirce, Secretary of the Commonwealth.

Levi Stockbridge, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Grinnell, James S., Greenfield.

Nichols, James R., Haverhill.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Anderson, John S., Shelburne, Franklin County Agricultural Society.

Baker, G. M., Marshfield, Marshfield Agricultural and Horticultural Society.

Bird, S. B., Framingham, Middlesex South Agricultural Society.

Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.

Demond, J. H., Northampton, Hampshire, Franklin & Hampden Ag'l Society.
 Farnsworth, E. C., Templeton, Worcester County West Agricultural Society.
 Gaylord, Flavel, Amherst, Hampshire Agricultural Society.
 Gleason, Samuel N., Warren, Worcester South Agricultural Society.
 Goodrich, E. H., Jr., Hinsdale, Highland Agricultural Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Herrick, Henry K., Blandford, Union Agricultural and Horticultural Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Jewett, George, Fitchburg, Worcester North Agricultural Society.
 Lane, John, East Bridgewater, Plymouth County Agricultural Society.
 Lynde, J. P., Athol, Worcester North-west Ag'l and Mechanical Society.
 Macy, Alexander, Jr., Nantucket, Nantucket Agricultural Society.
 Mayhew, David, Tisbury, Martha's Vineyard Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Perkins, Augustus T., Mashpee, Barnstable County Agricultural Society.
 Pierson, Henry M., Pittsfield, Berkshire Agricultural Society.
 Preston, A. W., North Adams, Hoosac Valley Agricultural Society.
 Sessions, William R., Hampden, Hampden Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Smith, Arthur A., Colrain, Deerfield Valley Agricultural Society.
 Taft, Velorous, Upton, Worcester South-east Agricultural Society.
 Varnum, A. C., Lowell, Middlesex North Agricultural Society.
 Wakefield, Horace P., Leicester, Eastern Hampden Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Wheeler, Merritt I., Great Barrington, Housatonic Agricultural Society.

Secretary, . . . John E. Russell.

1882.

Members Ex Officio.

John D. Long, Governor.

Byron Weston, Lieutenant-Governor.

Henry B. Peirce, Secretary of the Commonwealth.

Levi Stockbridge, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Grinnell, James S., Greenfield.

Nichols, James R., Haverhill.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Anderson, John S., Shelburne, Franklin County Agricultural Society.

Bird, S. B., Framingham, Middlesex South Agricultural Society.

Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.

Buell, Chauncey L., Ludlow, Hampden Agricultural Society.

Damon, D. E., Plymouth, Marshfield Agricultural and Horticultural Society.

Farnsworth, E. C., Templeton, Worcester County West Agricultural Society.
 Fay, Joseph Story, Falmouth, Barnstable County Agricultural Society.
 Gaylord, Flavel, Amherst, Hampshire Agricultural Society.
 Gleason, Samuel N., Warren, Worcester South Agricultural Society.
 Goodrich, E. H., Jr., Hinsdale, Highland Agricultural Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Haskell, H. C., Deerfield, Hampshire, Franklin and Hampden Ag'l Society.
 Herrick, Henry K., Blandford, Union Agricultural and Horticultural Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Hill, J. H., Amesbury, Amesbury and Salisbury Ag'l and Horticult'l Society.
 Jewett, George, Fitchburg, Worcester North Agricultural Society.
 Lane, John, East Bridgewater, Plymouth County Agricultural Society.
 Lynde, J. P., Athol, Worcester North-west Ag'l and Mechanical Society.
 Mayhew, David, Tisbury, Martha's Vineyard Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Noble, Henry, Pittsfield, Berkshire Agricultural Society.
 Round, Daniel, Nantucket, Nantucket Agricultural Society.
 Sessions, William R., Hampden, Eastern Hampden Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Smith, Arthur A., Colrain, Deerfield Valley Agricultural Society.
 Taft, Velorous, Upton, Worcester South-east Agricultural Society.
 Varnum, A. C., Lowell, Middlesex North Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Waterman, James M., Williamstown, Hoosac Valley Agricultural Society.
 Wheeler, Merritt I., Great Barrington, Housatonic Agricultural Society.

Secretary, . . . John E. Russell.

1883.

Members Ex Officio.

Benjamin F. Butler, Governor.

Oliver Ames, Lieutenant-Governor.

Henry B. Peirce, Secretary of the Commonwealth.

Paul A. Chadbourne, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Grinnell, James S., Greenfield.

Nichols, James R., Haverhill.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Bird, S. B., Framingham, Middlesex South Agricultural Society.

Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.

Buddington, Jonathan, Leyden, Franklin County Agricultural Society.

Buell, Chauncey L., Ludlow, Hampden Agricultural Society.

Damon, D. E., Plymouth, Marshfield Agricultural and Horticultural Society.

Davis, Everett A., Tisbury, Martha's Vineyard Agricultural Society.
 Edson, Nathan, Barnstable, Barnstable County Agricultural Society.
 Farnsworth, E. C., Templeton, Worcester County West Agricultural Society.
 Goodrich, E. H., Jr., Hinsdale, Highland Agricultural Society.
 Hadwen, O. B., Worcester, Worcester Agricultural Society.
 Haskell, H. C., Deerfield, Hampshire, Franklin and Hampden Ag'l Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Hill, J. H., Amesbury, Amesbury and Salisbury Ag'l and Horticult'l Society.
 Jewett, George, Fitchburg, Worcester North Agricultural Society.
 Lane, John, East Bridgewater, Plymouth County Agricultural Society.
 Lynde, J. P., Athol, Worcester North-west Ag'l and Mechanical Society.
 McKinstry, John O., Southbridge, Worcester South Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Noble, Henry, Pittsfield, Berkshire Agricultural Society.
 Nye, Lewis C., Blandford, Union Agricultural and Horticultural Society.
 Round, Daniel, Nantucket, Nantucket Agricultural Society.
 Sessions, William R., Hampden, Eastern Hampden Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Smith, Arthur A., Colrain, Deerfield Valley Agricultural Society.
 Taft, Velorous, Upton, Worcester South-east Agricultural Society.
 Varnum, A. C., Lowell, Middlesex North Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Warner, W. L., Sunderland, Hampshire Agricultural Society.
 Waterman, James M., Williamstown, Hoosac Valley Agricultural Society.
 Wheeler, Merritt I., Great Barrington, Housatonic Agricultural Society.

Secretary, . . . John E. Russell.

1884.

Members Ex Officio.

George D. Robinson, Governor.
 Oliver Ames, Lieutenant-Governor.
 Henry B. Peirce, Secretary of the Commonwealth.
 James C. Greenough, President Massachusetts Agricultural College.
 Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Grinnell, James S., Greenfield.
 Nichols, James R., Haverhill.
 Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Barrus, Alvan, Goshen, Hillside Agricultural Society.
 Bird, S. B., Framingham, Middlesex South Agricultural Society.
 Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.
 Bowen, W. S., Peru, Highland Agricultural Society.
 Buddington, Jonathan, Leyden, Franklin County Agricultural Society.

Buell, Chauncey L., Ludlow, Hampden Agricultural Society.
 Damon, D. E., Plymouth, Marshfield Agricultural and Horticultural Society.
 Davis, Everett A., Tisbury, Martha's Vineyard Agricultural Society.
 Edson, Nathan, Barnstable, Barnstable County Agricultural Society.
 Goddard, J. Henry, Barre, Worcester County West Agricultural Society.
 Goodrich, Edwin A., Fitchburg, Worcester North Agricultural Society.
 Hartshorn, C. L., Worcester, Worcester Agricultural Society.
 Haskell, H. C., Deerfield, Hampshire, Franklin and Hampden Ag'l Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Hill, J. H., Amesbury, Amesbury and Salisbury Ag'l and Horticult'l Society.
 Lane, John, East Bridgewater, Plymouth County Agricultural Society.
 Lynde, J. P., Athol, Worcester North-west Ag'l and Mechanical Society.
 McKinstry, John O., Southbridge, Worcester South Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Noble, Henry, Pittsfield, Berkshire Agricultural Society.
 Nye, Lewis C., Blandford, Union Agricultural and Horticultural Society.
 Round, Daniel, Nantucket, Nantucket Agricultural Society.
 Sessions, William R., Hampden, Eastern Hampden Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Smith, Arthur A., Colrain, Deerfield Valley Agricultural Society.
 Taft, Velorous, Upton, Worcester South-east Agricultural Society.
 Varnum, A. C., Lowell, Middlesex North Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Warner, W. L., Sunderland, Hampshire Agricultural Society.
 Waterman, James M., Williamstown, Hoosac Valley Agricultural Society.
 Wheeler, Merritt I., Great Barrington, Housatonic Agricultural Society.

Secretary, . . . John E. Russell.

1885.

Members *Ex Officio*.

George D. Robinson, Governor.

Oliver Ames, Lieutenant-Governor.

Henry B. Peirce, Secretary of the Commonwealth.

James C. Greenough, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Grinnell, James S., Greenfield.

Nichols, James R., Haverhill.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Barrus, Alvan, Goshen, Hillside Agricultural Society.

Bird, S. B., Framingham, Middlesex South Agricultural Society.

Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.

Bowen, W. S., Peru, Highland Agricultural Society.

Brooks, Ethan, West Springfield, Hampden Agricultural Society.
 Buddington, Jonathan, Leyden, Franklin County Agricultural Society.
 Burgess, R. E., Nantucket, Nantucket Agricultural Society.
 Damon, D. E., Plymouth, Marshfield Agricultural and Horticultural Society.
 Davis, Everett A., Tisbury, Martha's Vineyard Agricultural Society.
 Edson, Nathan, Barnstable, Barnstable County Agricultural Society.
 Goddard, J. Henry, Barre, Worcester County West Agricultural Society.
 Goodrich, Edwin A., Fitchburg, Worcester North Agricultural Society.
 Hartshorn, C. L., Worcester, Worcester Agricultural Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Hill, J. H., Amesbury, Amesbury and Salisbury Ag'l and Horticult'l Society.
 Hobbs, George W., Uxbridge, Blackstone Valley Agricultural Society.
 Lane, John, East Bridgewater, Plymouth County Agricultural Society.
 Lynde, J. P., Athol, Worcester North-west Ag'l and Mechanical Society.
 McKinstry, John O., Southbridge, Worcester South Agricultural Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Nye, Lewis C., Blandford, Union Agricultural and Horticultural Society.
 Owen, Harvey M., Lanesborough, Berkshire Agricultural Society.
 Porter, J. D., Hatfield, Hampshire, Franklin and Hampden Ag'l Society.
 Sessions, William R., Hampden, Eastern Hampden Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Smith, Arthur A., Colrain, Deerfield Valley Agricultural Society.
 Upton, Daniel, Adams, Hoosac Valley Agricultural Society.
 Varnum, A. C., Lowell, Middlesex North Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Warner, W. L., Sunderland, Hampshire Agricultural Society.
 Wheeler, Merritt I., Great Barrington, Housatonic Agricultural Society.
 Wood, E. W., Newton, Massachusetts Horticultural Society.

Secretary, . . . John E. Russell.

1886.

Members Ex Officio.

George D. Robinson, Governor.

Oliver Ames, Lieutenant-Governor.

Henry B. Peirce, Secretary of the Commonwealth.

James C. Greenough, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Grinnell, James S., Greenfield.

Nichols, James R., Haverhill.

Wilder, Marshall P., Dorchester.

Members chosen by the Societies.

Barrus, Alvan, Goshen, Hillside Agricultural Society.

Bartholomew, S. A., Blandford, Union Agricultural and Horticultural Society.

Bird, S. B., Framingham, Middlesex South Agricultural Society.

Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.
 Bowen, W. S., Peru, Highland Agricultural Society.
 Brooks, Ethan, West Springfield, Hampden Agricultural Society.
 Burgess, R. E., Nantucket, Nantucket Agricultural Society.
 Cushman, Elbridge, Lakeville, Plymouth County Agricultural Society.
 Damon, D. E., Plymouth, Marshfield Agricultural and Horticultural Society.
 Douty, Bainbridge, Charlton, Worcester South Agricultural Society.
 Edson, Nathan, Barnstable, Barnstable County Agricultural Society.
 Goddard, J. Henry, Barre, Worcester County West Agricultural Society.
 Goodrich, Edwin A., Fitchburg, Worcester North Agricultural Society.
 Hartshorn, C. L., Worcester, Worcester Agricultural Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Hill, J. H., Amesbury, Amesbury and Salisbury Ag'l and Horticult'l Society.
 Lynde, J. P., Athol, Worcester North-west Ag'l and Mechanical Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Owen, Harvey M., Lanesborough, Berkshire Agricultural Society.
 Porter, J. D., Hatfield, Hampshire, Franklin and Hampden Ag'l Society.
 Sessions, William R., Hampden, Eastern Hampden Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Smith, Arthur A., Colrain, Deerfield Valley Agricultural Society.
 Smith, William W., Amherst, Hampshire Agricultural Society.
 Smith, Zeri, Deerfield, Franklin County Agricultural Society.
 Taft, Velorous, Upton, Blackstone Valley Agricultural Society.
 Upton, Daniel, Adams, Hoosac Valley Agricultural Society.
 Varnum, A. C., Lowell, Middlesex North Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Wheeler, Merritt I., Great Barrington, Housatonic Agricultural Society.
 Whiting, Henry L., Tisbury, Martha's Vineyard Agricultural Society.
 Wood, E. W., Newton, Massachusetts Horticultural Society.

Secretary, . . . John E. Russell.

1887.

Members Ex Officio.

Oliver Ames, Governor.

J. Q. A. Brackett, Lieutenant-Governor.

Henry B. Peirce, Secretary of the Commonwealth.

Henry H. Goodell, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Grinnell, James S., Greenfield.

Nichols, James R., Haverhill.

Stockwell, James W., Sutton.

Members chosen by the Societies.

Bartholomew, S. A., Blandford, Union Agricultural and Horticultural Society.

Bird, S. B., Framingham, Middlesex South Agricultural Society.

Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.

Brooks, Ethan, West Springfield, Hampden Agricultural Society.
 Burgess, R. E., Nantucket, Nantucket Agricultural Society.
 Burnett, Edward, Southborough, Bay State Agricultural Society.
 Clark, S. W., Plainfield, Hillside Agricultural Society.
 Cruickshanks, George, Fitchburg, Worcester North Agricultural Society.
 Cushman, Elbridge, Lakeville, Plymouth County Agricultural Society.
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 Hill, J. H., Amesbury, Amesbury and Salisbury Ag'l and Horticult'l Society.
 Howes, F. G., Ashfield, Deerfield Valley Agricultural Society.
 Lynde, J. P., Athol, Worcester North-west Ag'l and Mechan'l Society.
 Moore, John B., Concord, Middlesex Agricultural Society.
 Owen, Harvey M., Pittsfield, Berkshire Agricultural Society.
 Porter, J. D., Hatfield, Hampshire, Franklin and Hampden Ag'l Society.
 Sessions, William R., Hampden, Eastern Hampden Agricultural Society.
 Slade, Avery P., Somerset, Bristol County Agricultural Society.
 Snow, W. H., Becket, Highland Agricultural Society.
 Smith, William W., Amherst, Hampshire Agricultural Society.
 Smith, Zeri, Deerfield, Franklin County Agricultural Society.
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 Wheeler, Merritt I., Great Barrington, Housatonic Agricultural Society.
 Whiting, Henry L., West Tisbury, Martha's Vineyard Agricultural Society.
 Wood, E. W., Newton, Massachusetts Horticultural Society.

Secretary, . . . William R. Sessions.

1888.

Members Ex Officio.

Oliver Ames, Governor.

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Henry B. Peirce, Secretary of the Commonwealth.

Henry H. Goodell, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

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Loring, George B., Salem.

Stockwell, James W., Sutton.

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 Burnett, Edward, Southborough, Bay State Agricultural Society.
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 Cruickshanks, George, Fitchburg, Worcester North Agricultural Society.
 Currier, W. H. B., Amesbury, Amesbury and Salisbury Ag'l and H't'l Society.
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 Hickox, S. A., Williamstown, Hoosac Valley Agricultural Society.
 Holbrook, William, Palmer, Eastern Hampden Agricultural Society.
 Howes, F. G., Ashfield, Deerfield Valley Agricultural Society.
 Lynde, J. P., Athol, Worcester North-west Ag'l and Mechan'l Society.
 Peterson, George J., Marshfield, Marshfield Ag'l and Horticultural Society.
 Rawson, W. W., Arlington, Middlesex Agricultural Society.
 Rowley, J. H., Egremont, Housatonic Agricultural Society.
 Sheldon, F. K., Southampton, Hampshire, Franklin & Hampden Ag'l Society.
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 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Whiting, Henry L., Tisbury, Martha's Vineyard Agricultural Society.
 Wood, E. W., Newton, Massachusetts Horticultural Society.

Secretary, . . . William R. Sessions.

1889.

Members Ex Officio.

Oliver Ames, Governor.

J. Q. A. Brackett, Lieutenant-Governor.

Henry B. Peirce, Secretary of the Commonwealth.

Henry H. Goodell, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Grinnell, James S., Greenfield.

Loring, George B., Salem.

Stockwell, James W., Sutton.

Members chosen by the Societies.

Avery, J. G., Spencer, Spencer Farmers' and Mechanics' Association.
 Bird, S. B., Framingham, Middlesex South Agricultural Society.
 Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.
 Bradley, Alonzo, Lee, Berkshire Agricultural Society.
 Burnett, Edward, Southborough, Bay State Agricultural Society.
 Clark, S. W., Plainfield, Hillside Agricultural Society.
 Clemence, G. L., Southbridge, Worcester South Agricultural Society.
 Cruickshanks, George, Fitchburg, Worcester North Agricultural Society.
 Currier, W. H. B., Amesbury, Amesbury and Salisbury Ag'l and Ht'l Society.
 Cushman, Elbridge, Lakeville, Plymouth County Agricultural Society.
 Edson, Nathan, Barnstable, Barnstable County Agricultural Society.
 Gardner, Charles W., Nantucket, Nantucket Agricultural Society.
 Goddard, J. Henry, Barre, Worcester County West Agricultural Society.
 Hartshorn, C. L., Worcester, Worcester Agricultural Society.
 Hayden, C. B., Blandford, Union Agricultural and Horticultural Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Hickox, S. A., Williamstown, Hoosac Valley Agricultural Society.
 Holbrook, William, Palmer, Eastern Hampden Agricultural Society.
 Horton, D. A., Northampton, Hampshire Agricultural Society.
 Howe, D. M., Charlton, Oxford Agricultural Society.
 Howes, F. G., Ashfield, Deerfield Valley Agricultural Society.
 Lynde, J. P., Athol, Worcester North-west Ag'l and Mechanical Society.
 Newhall, J. C., Conway, Franklin County Agricultural Society.
 Peterson, George J., Marshfield, Marshfield Ag'l and Horticultural Society.
 Rawson, W. W., Arlington, Middlesex Agricultural Society.
 Rowley, J. H., Egremont, Housatonic Agricultural Society.
 Shaler, N. S., Cambridge, Martha's Vineyard Agricultural Society.
 Sheldon, F. K., Northampton, Hampshire, Franklin & Hampden Ag'l Society.
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 Taylor, George S., Chicopee Falls, Hampden Agricultural Society.
 Varnum, A. C., Lowell, Middlesex North Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Wood, E. W., Newton, Massachusetts Horticultural Society.

Secretary, . . . William R. Sessions.

1890.

Members Ex Officio.

J. Q. A. Brackett, Governor.
 William H. Haile, Lieutenant-Governor.
 Henry B. Peirce, Secretary of the Commonwealth.
 Henry H. Goodell, President Massachusetts Agricultural College.
 Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Grinnell, James S., Greenfield.

Loring, George B., Salem.

Stockwell, James W., Sutton.

Members chosen by the Societies.

Appleton, Francis H., Peabody, Bay State Agricultural Society.
 Avery, J. D., Buckland, Deerfield Valley Agricultural Society.
 Avery, J. G., Spencer, Spencer Farmers' and Mechanics' Association.
 Bancroft, William, Chesterfield, Hillside Agricultural Society.
 Bird, S. B., Framingham, Middlesex South Agricultural Society.
 Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.
 Bowker, W. H., Boston, Worcester North-west Ag'l and Mechanical Society.
 Bradley, Alonzo, Lee, Berkshire Agricultural Society.
 Clemence, G. L., Southbridge, Worcester South Agricultural Society.
 Cruickshanks, George, Fitchburg, Worcester North Agricultural Society.
 Currier, W. H. B., Amesbury, Amesbury and Salisbury Ag'l and H'l Society.
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 Hartshorn, C. L., Worcester, Worcester Agricultural Society.
 Harwood, P. M., Barre, Worcester County West Agricultural Society.
 Hayden, C. B., Blandford, Union Agricultural and Horticultural Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Hickox, S. A., Williamstown, Hoosac Valley Agricultural Society.
 Holbrook, William, Palmer, Eastern Hampden Agricultural Society.
 Horton, D. A., Northampton, Hampshire Agricultural Society.
 Howe, D. M., Charlton, Oxford Agricultural Society.
 Newhall, J. C., Conway, Franklin County Agricultural Society.
 Peterson, George J., Marshfield, Marshfield Ag'l and Horticultural Society.
 Pratt, Augustus, Middleborough, Plymouth County Agricultural Society.
 Rawson, W. W., Arlington, Middlesex Agricultural Society.
 Rowley, J. H., Egremont, Housatonic Agricultural Society.
 Shaler, N. S., Cambridge, Martha's Vineyard Agricultural Society.
 Shaw, N. W., Raynham, Bristol County Agricultural Society.
 Sheldon, F. K., Southampton, Hampshire, Franklin & Hampden Ag'l Society.
 Taft, Velorous, Upton, Blackstone Valley Agricultural Society.
 Taylor, George S., Chicopee, Hampden Agricultural Society.
 Taylor, Hiram, Middlefield, Highland Agricultural Society.
 Varnum, A. C., Lowell, Middlesex North Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Wood, E. W., Newton, Massachusetts Horticultural Society.

Secretary, . . . William R. Sessions.

1891.

Members Ex Officio.

William E. Russell, Governor.

William H. Halle, Lieutenant-Governor.

William M. Olin, Secretary of the Commonwealth.

Henry H. Goodell, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Cushman, Elbridge, Lakeville.

Grinnell, James S., Greenfield.

Stockwell, James W., Sutton.

Members chosen by the Societies.

Alger, Isaac, Attleborough, Attleborough Agricultural Association.

Appleton, Francis H., Peabody, Bay State Agricultural Society.

Avery, J. D., Buckland, Deerfield Valley Agricultural Society.

Avery, J. G., Spencer, Spencer Farmers' and Mechanics' Association.

Bancroft, William, Chesterfield, Hillside Agricultural Society.

Bird, S. B., Framingham, Middlesex South Agricultural Society.

Bowditch, E. F., Framingham, Mass. Society for Promoting Agriculture.

Bowker, W. H., Boston, Worcester North-west Ag'l and Mechanical Society.

Bucklin, A. J., Adams, Hoosac Valley Agricultural Society.

Clapp, E. C., Northampton, Hampshire, Franklin and Hampden Ag'l Society.

Clemence, G. L., Southbridge, Worcester South Agricultural Society.

Cook, Henry A., Northbridge, Blackstone Valley Agricultural Society.

Cruikshanks, George, Fitchburg, Worcester North Agricultural Society.

Edson, Nathan, Barnstable, Barnstable County Agricultural Society.

Fowler, C. F., Westfield, Hampden Agricultural Society.

Gardner, George, H., Nantucket, Nantucket Agricultural Society.

Hartshorn, C. L., Worcester, Worcester Agricultural Society.

Harwood, P. M., Barre, Worcester County West Ag'l Society.

Hayden, C. B., Blandford, Union Agricultural and Horticultural Society.

Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.

Holbrook, William, Palmer, Eastern Hampden Agricultural Society.

Horton, D. A., Northampton, Hampshire Agricultural Society.

Howe, D. M., Charlton, Oxford Agricultural Society.

Kilbourn, W. A., Lancaster, Worcester East Agricultural Society.

Mills, Charles A., Williamstown, Berkshire Agricultural Society.

Newhall, J. C., Conway, Franklin County Agricultural Society.

Pratt, Augustus, Middleborough, Plymouth County Agricultural Society.

Rawson, W. W., Arlington, Middlesex Agricultural Society.

Reed, Q. L., Weymouth, Weymouth Agricultural and Industrial Society.

Richards, L. S., Marshfield, Marshfield Ag'l and Horticultural Society.

Rowley, J. H., Egremont, Housatonic Agricultural Society.

Sargent, F. W., Amesbury, Amesbury and Salisbury Ag'l and Ht'l Society.

Shaler, N. S., Cambridge, Martha's Vineyard Agricultural Society.
 Shaw, N. W., Raynham, Bristol County Agricultural Society.
 Taylor, Hiram, Middlefield, Highland Agricultural Society.
 Varnum, A. C., Lowell, Middlesex North Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Wood, E. W., Newton, Massachusetts Horticultural Society.

Secretary, . . . William R. Sessions.

1892.

Members Ex Officio.

William E. Russell, Governor.

William H. Haile, Lieutenant-Governor.

William M. Olin, Secretary of the Commonwealth.

Henry H. Goodell, President Massachusetts Agricultural College.

Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Cushman, Elbridge, Lakeville.

Grinnell, James S., Greenfield.

Horton, D. A., Northampton.

Members chosen by the Societies.

Alger, Isaac, Attleborough, Attleborough Agricultural Association.
 Appleton, Francis H., Peabody, Bay State Agricultural Society.
 Avery, J. D., Buckland, Deerfield Valley Agricultural Society.
 Bancroft, William, Chesterfield, Hillside Agricultural Society.
 Bird, S. B., Framingham, Middlesex South Agricultural Society.
 Bowker, W. H., Boston, Worcester North-west Ag'l and Mechanical Society.
 Bucklin, A. J., Adams, Hoosac Valley Agricultural Society.
 Bursley, John, Barnstable, Barnstable County Agricultural Society.
 Clapp, E. C., Northampton, Hampshire, Franklin and Hampden Ag'l Society.
 Clemence, G. L., Southbridge, Worcester South Agricultural Society.
 Cook, Henry A., Northbridge, Blackstone Valley Agricultural Society.
 Cruickshanks, George, Fitchburg, Worcester North Agricultural Society.
 Fowler, C. F., Westfield, Hampden Agricultural Society.
 Gardner, George H., Nantucket, Nantucket Agricultural Society.
 Hartshorn, C. L., Worcester, Worcester Agricultural Society.
 Harwood, P. M., Barre, Worcester County West Agricultural Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Holbrook, William, Palmer, Eastern Hampden Agricultural Society.
 Kilbourn, W. A., Lancaster, Worcester East Agricultural Society.
 Kimball, John E., Oxford, Oxford Agricultural Society.
 Mills, Charles A., Southborough, Berkshire Agricultural Society.
 Newhall, J. C., Conway, Franklin County Agricultural Society.
 Pratt, Augustus, Middleborough, Plymouth County Agricultural Society.
 Rawson, W. W., Arlington, Middlesex Agricultural Society.

Reed, Q. L., Weymouth, Weymouth Agricultural and Industrial Society.
 Richards, L. S., Marshfield, Marshfield Ag'l and Horticultural Society.
 Rowley, G. C., Blandford, Union Agricultural and Horticultural Society.
 Rowley, J. H., Egremont, Housatonic Agricultural Society.
 Russell, Henry S., Milton, Massachusetts Society for Promoting Agriculture.
 Sargent, F. W., Amesbury, Amesbury and Salisbury Ag'l and H't'l Society.
 Shaler, N. S., Cambridge, Martha's Vineyard Agricultural Society.
 Shaw, N. W., Raynham, Bristol County Agricultural Society.
 Taylor, Hiram, Middlefield, Highland Agricultural Society.
 Varnum, A. C., Lowell, Middlesex North Agricultural Society.
 Ware, Benjamin P., Marblehead, Essex Agricultural Society.
 Warren, Edward, Leicester, Spencer Farmers' and Mechanics' Association.
 West, L. W., Hadley, Hampshire Agricultural Society.
 Wood, E. W., Newton, Massachusetts Horticultural Society.

Secretary, . . . William R. Sessions.

1893.

Members Ex Officio.

William E. Russell, Governor.
 Roger Wolcott, Lieutenant-Governor.
 William M. Olin, Secretary of the Commonwealth.
 Henry H. Goodell, President Massachusetts Agricultural College.
 Charles A. Goessmann, Chemist of the Board.

Members appointed by the Governor and Council.

Cushman, Elbridge, Lakeville.
 Grinnell, James S., Greenfield.
 Horton, D. A., Northampton.

Members chosen by the Societies.

Alger, Isaac, Attleborough, Attleborough Agricultural Association.
 Appleton, Francis H., Peabody, Essex Agricultural Society.
 Bancroft, William, Chesterfield, Hillside Agricultural Society.
 Barton, H. A., Jr., Dalton, Highland Agricultural Society.
 Bowker, W. H., Boston, Worcester North-west Ag'l and Mechanical Society.
 Bucklin, A. J., Adams, Hoosac Valley Agricultural Society.
 Bursley, John, Barnstable, Barnstable County Agricultural Society.
 Clapp, E. C., Northampton, Hampshire, Franklin and Hampden Ag'l Society.
 • Clemence, G. L., Southbridge, Worcester South Agricultural Society.
 Cook, Henry A., Northbridge, Blackstone Valley Agricultural Society.
 Cruickshanks, George, Fitchburg, Worcester North Agricultural Society.
 Damon, Isaac, Wayland, Middlesex South Agricultural Society.
 Fowler, C. F., Westfield, Hampden Agricultural Society.
 French, J. D. W., Andover, Bay State Agricultural Society.
 Hartshorn, C. L., Worcester, Worcester Agricultural Society.

Harwood, E. A., North Brookfield; Worcester County West Ag'l Society.
 Hersey, Edmund, Hingham, Hingham Ag'l and Horticultural Society.
 Holbrook, William, Palmer, Eastern Hampden Agricultural Society.
 Kilbourn, W. A., Lancaster, Worcester East Agricultural Society.
 Kimball, John E., Oxford, Oxford Agricultural Society.
 McIntosh, William W., Nantucket, Nantucket Agricultural Society.
 Mills, Charles A., Southborough, Berkshire Agricultural Society.
 Newhall, J. C., Conway, Franklin County Agricultural Society.
 Pratt, Augustus, Middleborough, Plymouth County Agricultural Society.
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 Shaw, N. W., Raynham, Bristol County Agricultural Society.
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 Ward, Charles E., Buckland, Deerfield Valley Agricultural Society.
 Warren, Edward, Leicester, Spencer Farmers' and Mechanics' Association.
 West, L. W., Hadley, Hampshire Agricultural Society.
 Wood, E. W., Newton, Massachusetts Horticultural Society.

Secretary, . . . William R. Sessions.

SYNOPSIS OF EACH VOLUME.

REPORTS OF REV. HENRY COLMAN.

First Report, 1837. 139 pages.

Introduction: letter of transmittal to His Excellency Edward Everett; extracts from statement of Commissioner for Agricultural Survey to committee on agriculture of House of Representatives.

Report on agriculture of county of Essex: general description; crops, grasses, salt hay, Indian corn, wheat, rye, barley, oats, buckwheat, potatoes, onions; the dairy; sheep husbandry; beef; swine; neat cattle; manures; fruit trees; forest trees; fences; farm buildings; farming implements; weeds; bees; miscellaneous, sunflower for oil, beet sugar, silk culture, milkweed, manufactures, keep of oxen, slaughter-house offal; improvements; farm reports; agricultural schools; agricultural society.

Appendix: instructions of executive to commissioner; circular to farmers on subject of agricultural survey of State by authority of Legislature; farm report; extracts from letters; cultivation of rye, John Keely's statement; cultivation of the larch; stone buildings; weeds and thorns; bees; diking salt marsh; lime; Smith's subsoil plough; rack heath plough; reports of valuation committee in 1831.

Index. Errata.

Second Report, 1838. 194 pages.

Introduction: letter of transmittal to His Excellency Edward Everett.

Report on agriculture of county of Berkshire: general description; boundaries and situation; division of territory; general features and aspect; soils; markets and manufactures; climate; crops, amount of, rotation, expenses and profits of, teasels, flax; dairy husbandry, produce and expenses; dairy stock; amount of dairy produce; neat cattle, extraordinary cows, improvement at Ten Hills stock farm, cream pot breed, dairy and soiling in Waltham, Middlesex County, raising calves, quality and management of dairy produce; swine; manures; farm buildings; Shakers' establishments; experiments and improvements, potatoes, carrots, rutabaga, oats, wheat, wire worm, grain insect, grain worm, locust borer; reports of farms; agricultural statistics; agricultural society; miscellaneous, manufacture of charcoal, marble quarries, natural scenery, the Giant's Staircase; desirable agricultural improvements,

agricultural capacities of Berkshire, exclusive husbandry, domestic economy, increase of cultivation and products, comparative value of hay, vegetables and corn, apples, raising live stock, compost and liquid manures; machinery, drill-barrow, threshing-machine, smoke-house, water-works; conclusion.

Appendix: meteorological tables; raising calves; cheese shelves; letters on ashes, lime, etc.; feed for swine; experiment with different steeps for seed wheat; the grain worm; artificial manure, the urine cistern; agricultural statistics, returns of Bernardston, Franklin County, Marlborough, Middlesex County, Barre, Worcester County; grasses of Berkshire County; reports of valuation committee in 1831, Berkshire County.

Index. Errata.

Third Report, 1839. 252 pages.

Introduction: letter of transmittal to president of Senate; Senate order; agricultural report; wheat returns of counties, Berkshire, Franklin, Hampshire, Hampden, Worcester, Middlesex, Essex, Norfolk, Bristol, Plymouth, Barnstable, Dukes, Nantucket, Suffolk.

Report on culture of wheat in Massachusetts: causes of failure, rust, mildew, smut, wire worm, Hessian fly, grain insect; soils for; varieties of; manures for, lime, Berkshire marls, ashes, green crops for manure, rotation of crops; selection of seed; quantity of seed to an acre; depth of sowing; ploughing for; cleanness of cultivation; draining; deep cultivation; recent English improvements; agricultural improvements.

Report on culture of silk: history of silk culture in United States; patronage of State; mulberry trees, black, white, Broussa, Alpine, Perottet, Morus Expansa or Roman, Canton, Sharpe's; mode of managing and cultivating improved varieties; mulberries from seed; silk to an acre and cost of production; product of an acre; leaves to pound; varieties of worm; cocoons for pound of silk; natural and artificial management; provision for winding cocoons; improved cocooneries; mode of delaying hatching of eggs; destruction of moth; reeling and reels; domestic industry; manufacture of silk; raw silk; calculations respecting silk products; manufactures in England; our own condition; production of silk in Massachusetts; labor applicable to silk culture; silk culture for the clergy, for pauper establishments, for the Shakers, for schools; conclusion.

Appendix: annual imports of bread stuffs; sowing wheat in drills or broadcast; cultivation of wheat; manures for wheat; ploughing in crops for manure; experiment in forwarding seeds; analysis of different varieties of wheat; using the best seed; quantity of seed to acre; food of plants; chemical phenomena in germination and vegetation; draining and subsoil ploughing; redemption of bog meadow; act for encouragement of culture of silk; mulberry, Sharpe's variety; letters by C. Haskell concerning production of silk in household way; letter of James Deane, M.D.; Deane's silk reel; experiment of J. V. McLean; the silk worm, a synoptical table, showing rearing accord-

ing to method of M. Camille Beauvais, and process of ventilation of M. Darcet, by M. Brunet De LaGrange; Messrs. Cheney's experiment; management of Joseph Field; silk culture in France.

Index. Errata.

Fourth Report, 1840. 557 pages.

Introduction. Contents. Errata.

Report on agriculture of county of Franklin: general description; aspect; soils; condition of inhabitants; agricultural pursuits; crops, grasses, Indian corn, oats, rye, wheat, broom-corn, hops, barley, buckwheat, teasels, peppermint; the dairy; maple sugar; live stock, neat cattle, character and weight, cows, stall-fed cattle, management of stall-fed animals, expenses and profits of stall-feeding, gain of stall-fed cattle, loss of weight in driving, live and dead weight of cattle, pasturage; sheep, weight of, early lambs, housing, care of ewes, manger for sheep, diseases of and remedies, general management, yield of wool; swine; horses; manures, lime, gypsum, wood ashes, clay, general management of; rotation of crops; reports of farms; domestic economy; silk; flax; experiments, improvements, etc., freezing seed wheat, value of corn-stalks, double crops on same land, time of cutting herds-grass, natural and artificial grasses, seeding potatoes, redeeming land, irrigation, large yield of grass; miscellaneous, manual labor school, scythe and snath factories; price of land; buildings; wood and fuel; orchards; agricultural implements, roller, wagons, plough, hay-knife; condition of rural population; agricultural society; public roads; natural scenery.

Report on agriculture of county of Middlesex: general description; aspect; area and divisions; soil; pursuits of inhabitants; crops and products, Indian corn, wheat, oats, rye, barley, buckwheat, potatoes, mangel-wurzel, etc., beets, hops, grasses, red clover; rotation of crops; dairy and milk establishments; dairy stock; Brighton market; swine; manures; agricultural improvements; fruits and orchards; forest trees; ornamental trees; particular farms; agricultural implements; nurseries; agricultural society; miscellaneous; agricultural education; Mount Auburn.

Appendix: sheep and wool; relative value of different kinds of food for sheep; agricultural chemistry; experiments in culture of silk; table showing amount of hops inspected in Massachusetts under law passed June, 1806; account of a farm from 1811 to 1836; pedigree of cow of Paoli Lathrop; pedigree of H. Whitney's short-horn cows, New Haven, Conn.; pedigree of cow of George Hood; method of determining weight of cattle; extract from Revised Statutes; plan of Mr. Phinney's hog styes; G. B. Emerson on the forest trees of Massachusetts; number of plants on an acre; forms of accounts; feed of sheep; queries by the Royal Danish Rural Economy Society; list of plants considered as weeds, by Rev. John L. Russell.

ABSTRACTS FROM RETURNS OF SOCIETIES.

1845. 214 pages.

Introduction by Secretary John G. Palfrey; list of agricultural societies; resolve for an agricultural survey of State; laws in force relating to agricultural corporations; objects of law requiring returns from societies.

Abstract from returns of societies: Massachusetts, improvement of stock; Essex, ploughing with double teams, with single teams, subsoil, working oxen, the dairy, meadow and swamp land, farms, fruit trees, live fences, vegetables, experiments on manures, domestic manufactures; Middlesex, cattle show, farms, etc.; Worcester, ploughing match, fat cattle, working oxen, bulls, milch cows, butter, root crops, mechanic's tools and agricultural implements; Hampshire, Franklin and Hampden, domestic manufactures, ploughing, stock, horses; Hampden, milch cows, fruits and vegetables, mechanical productions; Berkshire, agricultural products, herds-grass seed, ploughing match; Plymouth County, improvements, supervisor's report, ploughing match; Bristol County, fruit and vegetables, manufactures, ploughing match; Barnstable County, farms; abstract of premiums.

Appendix: addresses to the societies: intellectual and physical culture as connected with agriculture, by Rev. E. M. Stone; the profits of agriculture, by Asahel Foot, Jr.; the mutual dependence between agriculture and other pursuits, by Rev. Edward Hitchcock.

Description of stock recently imported by Massachusetts Society for Promoting Agriculture, with pedigree, by E. Phinney, Esq.

1846. 175 pages.

Introduction by Secretary John G. Palfrey; act relating to agricultural societies; suggestions concerning returns from societies.

Abstract from returns of societies: Massachusetts, report of examining committee to examine cattle imported by society, anatomy and diseases of animals, introduction of a new grass, extracts from Mr. Phinney's monthly reports; Essex, ploughing with double teams, milch cows and heifers, swine, meadow and swamp land, turning in crops as a manure, uses of salt in cultivation, grain crops, fruit trees, fruits; Middlesex, farms, etc., reclaimed meadows, orchards, milch cows, agricultural experiments; Worcester, ploughing match, fat cattle, milch cows, poultry, butter, cheese, mechanic's tools and agricultural implements, root crops, feeding experiments with cut and uncut hay; Hampshire, Franklin and Hampden, domestic manufactures, butter and cheese, stock, ploughing, fruits and vegetables; Hampden, ploughing match, working oxen, milch cows, fruits and flowers, reclaimed swamp land, reclaiming waste land; Berkshire, agricultural products, sheep,

horses, ploughing match, domestic manufactures, butter, cheese, etc.; Plymouth County, improvements, fruits and vegetables, supervisor's report; Bristol County, ploughing, stock, honey, fruits and vegetables, manufactures; Barnstable County, milch cows, forest trees; abstract of premiums.

Officers of societies for 1846-47.

1847. 284 pages.

Introduction by Secretary William B. Calhoun.

Abstract from returns of societies: Massachusetts, Mr. Phinney's report on cattle owned by society; Essex, milch cows and heifers, sheep, the dairy, subsoil ploughing, turning in green crops as manure, grain and root crops, cranberries, forest trees, essay on the cultivation of the onion, by John W. Proctor, essay on the cultivation of the cranberry, by David Choate, essay on the cultivation of the oak and other forest trees, by G. B. Perry, essay on the cultivation of the apple, by John M. Ives, essay on the cultivation of the pear, by W. D. Northend; Middlesex, farms, etc., reclaimed meadows, compost manure, apple, peach and pear trees, milch cows, carrot crop; Worcester, ploughing match, fat cattle, milch cows, steers, poultry, agricultural implements, root crops; Hampshire, Franklin and Hampden, domestic manufactures, stock, horses, ploughing, fruits, vegetables and flowers, reclaimed waste and swamp land; Hampden, manures, fruits and flowers; Berkshire, agricultural products, working oxen and steers, cows and heifers, ploughing match, agricultural implements, butter, cheese, etc.; Plymouth County, improvements, stock, ploughing match, supervisor's report; Bristol County, breeding stock, fruits, vegetable crops; Barnstable County, farms, milch cows, cranberries, domestic manufactures; abstract of premiums.

Addresses to the societies: improvements in agriculture, by T. E. Payson; the influence of science and capital, railroads and manufactures on agriculture, by E. H. Derby; fallacies in regard to labor, and drains on labor, by David Henshaw; the mind and the soil to be improved, by J. R. Lawton; the study of the natural sciences important to the farmer, by Prof. John L. Russell; the deficiency of scientific information in the agricultural community, and the need of its being supplied, by Prof. Chas. U. Shepard.

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1848. 271 pages.

Introduction by Secretary William B. Calhoun.

Abstract from returns of societies: Massachusetts, report of committee on imported stock; Middlesex, farms, etc., ploughing with double teams, milch cows; Berkshire, agricultural products, stock, horses, agricultural implements, ploughing, butter and cheese; Hampshire, Franklin and Hampden, horses, ploughing, fruits and vegetables, poultry; Worcester, ploughing match, fat cattle, working oxen, milch cows, bulls, heifers and steers, poultry, cheese, carrot crop; Essex, hints for consideration of trustees, farms, meadow and swamp land, milch cows,

the dairy, fattening cattle and swine, comparative value of crops, etc., grain and root crops, forest trees, essay on destroying weeds, by Andrew Nichols, essay on the improvement of wet meadows and swamp lands, by Temple Cutler, essay on the establishment of agricultural libraries by agricultural societies, by Allen W. Dodge; Plymouth County, supervisor's report, compost manure, oats, Indian corn, turnips, beets, wheat, ploughing with single ox teams, the dairy; Bristol County, ploughing, working oxen and steers, breeding stock, grain and vegetable crops, domestic manufactures; Hampden, reclaimed swamps, grain and root crops; Barnstable County, improved wet meadows, produce, cranberries; abstract of premiums.

Addresses to the societies: how to make farming profitable, by Josiah Newhall; the difficulties and obstacles to be encountered in agriculture, by John C. Gray; the progress of industry, and the harmony of labor, by A. H. Bullock; intellectual labor essential to success in agriculture, by Wm. H. Wood; the structure, the physical properties, and the chemical composition of the soil, by Prof. John P. Norton.

Remarks: by J. E. Teschemacher at several meetings of the Legislative Agricultural Society; by Marshall P. Wilder, at ninth and tenth meetings of the Legislative Agricultural Society, on fruit and fruit trees.

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1849. 428 pages.

Introduction by Secretary William B. Calhoun.

Abstract from returns of societies: Massachusetts, stock; Essex, the dairy, ploughing, Bartlett's double plough, farms, grain and root crops, experiment on cultivation of potatoes, experiments on manures, comparative value of crops as food for cattle, fruit trees, fruits, flowers, domestic manufactures, milch cows, heifers, bulls, fattening cattle and swine, colts, poultry, essay on the history and importance of Indian corn as an agricultural product, by Chas. L. Flint, essay on the cultivation of Indian corn, by Wm. R. Putnam; Middlesex, farms, etc., reclaimed meadows, fruit trees, cranberries, milch cows, butter, agricultural experiments, inventions; Worcester, ploughing match, fat cattle, milch cows, bulls, poultry, butter, root crops, essay on the means to be used to create a deeper interest in the cause of agriculture, by T. D. P. Stone; Hampshire, Franklin and Hampden, domestic manufactures, milch cows and steers, horses, ploughing, ploughs, experiments on manures, turning in green crops, reclaimed meadow, poultry; Hampden, farms, reclaimed swamps, grain and root crops, apple orchards, reclaimed waste land, sheep, milch cows; Berkshire, agricultural products, working oxen and steers, cows and heifers, sheep, fruits and vegetables, agricultural implements, ploughing match; Housatonic, agricultural productions, working oxen, milch cows and heifers, ploughing; Norfolk County, ploughing match, farms, ploughing, grain and root crops, milch cows and heifers, the dairy, working oxen, poultry, implements, fruits and flowers, domestic manufactures, remarks on the agriculture and manufactures of Norfolk County, tables illustrating the agriculture and manufactures of Norfolk County in 1845; Plymouth County, im-

provements, milch cows, ploughing, the dairy, fruits and vegetables, supervisor's report; Bristol County, breeding stock, ploughing, honey, ornamental trees, fancy articles, grain crops; Barnstable County, farms, etc., produce, grapes and cranberries, fruit trees, milch cows; abstract of premiums.

Addresses to the societies: agricultural improvements, by Asa T. Newhall; the privileges and duties of farmers, by Lilly Eaton; the application of science to farming, by W. C. Goldthwait; the necessity for the improvement of the soil, and the means of effecting it, by Prof. John P. Norton; fruit culture, by Geo. S. Willis; agriculture to be advanced by science and agricultural education, by Marshall P. Wilder; some of the defects of farmers, and the means of remedying them, by Increase S. Smith; practical hints on farming, by Wm. Buckminster.

1850. 476 pages.

Introduction by Secretary Amasa Walker; schedule of produce of dairies for Worcester Society fair; Board of Agriculture.

Abstract from returns of societies: Massachusetts, stock; Essex, milch cows, heifers, fat cattle, the dairy, bees and honey, poultry, domestic manufactures, agricultural implements, horticulture, fruit, culture of the cranberry, fruit trees, farms, reclaimed meadows, grain and root crops, essay on top dressings for mowing and pasture lands, by Chas. L. Flint, essay on rearing turkeys, by Allen W. Dodge, essay on farm accounts, farm dairies and agricultural registers, by Ben: Perley Poore; Middlesex, farms, etc., reclaimed meadows, orchards, milch cows, heifers, bulls, bread, butter, agricultural implements; Worcester, ploughing match, steers, fat cattle, heifers, milch cows, poultry, butter, agricultural implements, farms, root crops; Hampshire, Franklin and Hampden, mechanic arts, stock, horses, ploughing, poultry, vegetables, fruit; Hampden, milch cows, working oxen, farm horses, poultry, farm implements, fruit, bread, butter, director's report, grain and root crops, compost manure, apple orchard; Franklin County, horses, fruit, grain and root crops; Berkshire, agricultural products, agricultural implements, the dairy; Housatonic, agricultural products, ploughing, milch cows and heifers; Norfolk County, farms, grain crops, improving meadow and swamp land, milch cows, working oxen, fat cattle, swine, poultry, the dairy, fruits and flowers, bread, agricultural implements, agricultural laborers, suggestions to trustees by president; Plymouth County, improvements, supervisor's report; Bristol County, ploughing, working oxen, grain crops, fruit trees; Barnstable County, farms, grain crop, fruit and forest trees, fruit; abstract of premiums.

Addresses to the societies: the relation of land to the prosperity and happiness of the United States, by Caleb Cushing; the pleasures and the profits of farming, and the folly of quitting it, by George S. Boutwell; some of the means of making the soil more productive, by Rev. H. Tracy; the necessity of science to advance agriculture, by Dr. Daniel Lee; agricultural progress in Massachusetts for the last half century, by Chas. T. Russell; good husbandry and the incentives to it, by J. T.

Buckingham; the harmony of labor, by A. H. Bullock; what can be done for the farming of Norfolk County? by Charles Francis Adams; the application of chemistry to agriculture, by Chas. T. Jackson, M.D. Index.

1851. 692 pages.

Introduction by Secretary Amasa Walker; contents.

Abstract from returns of societies: Massachusetts, stock; Essex, milch cows, bulls, working oxen, breeding mares, poultry, dairy and vegetable products, cranberries, root and grain crops, experiments on manures, improving pasture lands, reclaimed meadow lands, farms, grape culture, bees and honey, communication on Michigan sod plough; Middlesex, farms, etc., reclaimed meadows, apple orchards, milch cows, heifers, butter, bread, agricultural experiments; Worcester, ploughing match, bulls, working oxen, steers, milch cows, heifers, fat cattle, poultry, agricultural implements, cheese, wheat and brome grass, compost manures, root crops; Hampshire, Franklin and Hampden, ploughing match, stock, horses, poultry, bread, butter and cheese, fruits and vegetables, domestic manufactures, reclaimed meadows, grain and root crops, orchards; Hampden, fat cattle, working oxen, milch cows, breeding mares and colts, swine, poultry, butter, vegetables, fruit, director's report, rye crop, oat crop, corn crop, carrot crop, turnip crop, reclaimed meadows, fruit trees, apple orchard, pear trees, peach orchard; Franklin County, ploughing match, town teams, cows, cheese, grain and root crops, hay crop; Hampshire, subsoil ploughing and compost manures, reclaimed meadows, ploughing, farms, fruit trees, milch cows, steers, fat cattle, butter and cheese; Berkshire, agricultural products, ploughing match, milch cows, sheep, fruit, household manufactures; Housatonic, agricultural products, agricultural implements, ploughing match; Norfolk County, farms, reclaimed meadows, peach orchards, ploughing, fat cattle, milch cows, swine, poultry, dairy products, bread, bees and honey, grain and root crops, agricultural implements; Plymouth County, improvements, supervisor's report, dairy articles; Bristol County, ploughing with ox teams, ploughing with horses and steers, sheep and swine, cows and heifers, fat cattle, steers and horses, ornamental and forest trees, grain crops; Barnstable County, farms, grain and root crops, cranberries, compost manures; Worcester County West, cattle show; abstract of premiums.

Massachusetts Board of Agriculture: associated agricultural convention; preamble and resolutions, with discussions; first meeting; second meeting; constitution and by-laws; resolutions on death of George Denny of Westborough; report on agricultural education; report of delegates, exhibition of Essex Society, Middlesex, Worcester, Worcester County West, Hampshire, Franklin and Hampden, Hampden, Franklin County, Hampshire, Berkshire, Housatonic, Norfolk County, Plymouth County, Bristol County, Barnstable County; third meeting, discussion on agricultural education, with memorial to Legislature; reports of committees, ploughing, milch cows and dairy products, neat cattle, farms and improvement of lands, cultivation and measure-

ment of crops, average cost of grain and root crops in Hampden County, agricultural implements, manufactures.

Addresses to the societies: some of the obstacles which have impeded the progress of agriculture, and the mode in which its improvement can specially be promoted, by Rev. Milton P. Braman; agricultural economy and agricultural ethics, by J. S. C. Knowlton; the advantages of science in its application to agriculture, by Prof. John P. Norton; the importance of agriculture and the means and motives for its promotion, by Marshall P. Wilder; agricultural education, by Marshall P. Wilder; the progress of agriculture, and the necessity for its further progress, by George R. Russell, LL.D.; the mechanical properties of the soil, and the consolidation and protection of manures, by Jas. E. Teschemacher.

Report on the potato rot; report of joint standing committee of Legislature, synopsis of several communications on cause and cure received by executive of Massachusetts, advertisement, communications from citizens of Massachusetts, foreign communications.

1852. 798 pages.

Introduction by Secretary Amasa Walker; roster Board of Agriculture; contents; agricultural exhibitions for 1853.

Abstract from returns of societies: Massachusetts, stock; Essex, poultry, sheep, swine, stallions, mares, colts, working oxen, steers, fat cattle, bulls, heifers, milch cows, ploughing with single, double and horse teams, the dairy, agricultural implements, root and grain crops, fruits, introduction of new fruits, vegetables, farms, fattening cattle and swine, manures, flowers, prize essay on sheep husbandry, by David Choate; Middlesex, farms, etc., orchards, pear orchards, reclaimed meadows, apples and pears, butter, horses, bulls and bull calves, heifers, milch cows, ploughing with double, single and horse teams, fat cattle; Worcester, ploughing match, working oxen, fat cattle, sheep, swine, steers, heifers, milch cows, poultry, cheese, butter, bulls, farms, meadow, swamp and uplands, root crops, feeding; Worcester County West, horses, mares and colts, ploughing, working oxen, bulls, dairy cows, heifers, steers and calves, fat oxen, town teams, sheep, swine, poultry, butter, cheese, root and grain crops, ploughs, fruits, farms; Hampshire, Franklin and Hampden, farms, ploughing, horses, manures, carrot crop, rye crop, corn crop, stock, poultry, bread, butter and cheese; Hampden, grain crops, turnip crop, milch cows; Franklin County, ploughing, grain and root crops, sheep, fat cattle, town teams, fowls, butter, bread, fruit; Hampshire, farms, reclaimed meadow lands, grain and root crops, butter, fruit trees, swine, compost manures; Berkshire, ploughing, grain and root crops, orchards, wheat, butter and cheese, fruits, etc., milch cows, horses, sheep, agricultural and mechanical implements; Housatonic, agricultural products, ploughing, oxen and steers, milch cows, heifers and calves, swine and poultry, sheep, horses, grass seed; Norfolk County, farms, ploughing, spading, agricultural implements, sheep, cows, bulls, heifers, steers, horses, working oxen, swine, poultry, bread, butter, roots and root culture, fruits and flowers,

grain crops, culture of wheat, peach orchards, clearing and enclosing unimproved lands, suggestions to members by B. V. French, essay on the soiling of cattle, by Josiah Quincy, Sr., essay on the principles of ploughing, by Sanford Howard, essay on the basket willow, by John Fleming, Jr.; Plymouth County, improvements, produce, forest trees, compost manure, Indian corn, root crops, onions and winter squashes, the dairy, horses and colts, stock, swine, ploughing, steers, working oxen, beef cattle, essay on compost manures, by J. E. Howard; Bristol County, farm improvements, crops, butter, cheese, bread and honey, fruits and flowers, ornamental and forest trees, domestic manufactures, fat cattle, horses and steers, breeding stock, sheep and swine, poultry, ploughing with oxen, ploughing with horses and steers, working cattle; Barnstable County, farms, grain crops, etc., sheep and swine; abstract of premiums.

Addresses to the societies: the farmer must be educated, by Gen. H. K. Oliver; chemistry in its relations to agriculture, by L. V. Bell; what has been and is doing for the general advancement of agriculture, by Prof. Jas. J. Mapes; facts in relation to the germination and growth of Indian corn, by John S. Gould; an agricultural education the great need of the American agriculturist, by W. S. King; what government ought to do for agriculture, by Robert C. Winthrop; importance of agriculture, by J. H. W. Page; intelligent agriculture, by Simon Brown.

Proceedings of State Board of Agriculture; members; duties of secretary; farmers' institutes; reports of delegates, exhibition of Essex Society, Middlesex, Worcester County West, Hampshire, Franklin and Hampden, Hampden, Franklin County, Hampshire, Berkshire, Housatonic, Norfolk County, Plymouth County, Bristol County, Barnstable County.

Essays: orchards, by John C. Gray; neat cattle, by Seth Sprague; culture of vegetables as farm products, by John W. Proctor; subsoil ploughing and thorough draining, by B. V. French; cows for dairy purposes, how to be selected, and the most advantageous use to be made of their milk, by Wm. Parkhurst; Indian corn, value of the crop, and the best mode of cultivating it, by J. R. Lawton; education of the young farmer, by Simon Brown; best method of laying down land to grass, and continuing the product, by Francis Brewer; farmers' clubs, by Stephen Reed, M.D.

Appendix: laws of Massachusetts; agricultural corporations, returns from agricultural societies, to exempt agricultural societies from taxation, to establish a State Board of Agriculture, to regulate agricultural, horticultural and ornamental tree associations.

REPORTS OF SECRETARY OF BOARD OF AGRICULTURE.

First Report, 1853. 685 pages.

Part I., 186 pages.

Roster Board of Agriculture.

Introduction by Secretary Chas. L. Flint; review of past and present condition of agriculture of Massachusetts; Indian corn, hay, wheat, rye, barley, oats, potatoes, root crops, fruit, the cranberry, broom-corn, tobacco, flax, hops, reclaimed lands, improvement of pastures, woodland, manures, stock, sheep, swine, poultry, farm labor, profits of farming, points of excellence of stock.

Reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Worcester, Hampshire, Franklin and Hampden, Franklin County, Berkshire, Housatonic, Bristol County.

Remarks on the climate of New England, by John C. Gray.

Appendix: returns of societies; finances, analysis of premiums and gratuities.

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Part II., 499 pages.

Preface. Officers of societies. Exhibitions for 1854.

Reports of committees: farms, reclaimed meadows, improving pasture land, orchards, forest trees, ploughing, manures, Indian corn, wheat, rye, barley, oats, beans, grass seed, root crops, cranberries, rotation of crops, stock, bulls, milch cows and heifers, working oxen, comparative value of crops as food for cattle, horses, sheep, swine, poultry, bees and honey, the dairy, fruits and vegetables, agricultural implements.

Addresses to the societies: fruit culture, by Joseph S. Cabot; descent of land, by George S. Boutwell; science in agriculture, by Prof. Wm. C. Fowler; soil analysis, by Wm. S. King; agricultural experiments, by Rev. F. D. Huntington; study of soils, by Dr. Daniel Lee; farm accounts, by Justus Tower; agricultural education, by Henry L. Dawes; the progress of agriculture, by Rev. F. D. Huntington; adaptation of soils, by Sanford Howard.

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Second Report, 1854. 722 pages.

Part I., 202 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; petition of committee of Board to Legislature concerning farm of State Reform School at Westborough; report of committee of Legislature; act; contract; by-laws; reports of committees of Board having charge of general improvements, etc., stock, corn crops, potatoes, root crops, carrots, hay, labor; climate of New

England, droughts, harvest of 1854, forests, drainage, irrigation, evaporation, change of climate; experiments with guano; muck; culture of the hop; exhibitions and condition of societies.

Reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex South, Worcester, Worcester County West, Hampden, Berkshire, Bristol County, Barnstable County.

Communication on forest trees, by John C. Gray.

Appendix: schedule and appraisal of stock, estimates, inventory, etc., State farm at Westborough; returns of societies, finances, analysis of premiums and gratuities.

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Part II., 520 pages.

Preface. Officers of societies.

Reports of committees: farms, reclaimed meadows, under-drainage, pasture lands, orchards, forest trees, hedges, deep tillage, ploughing, spading, manures, Indian corn, broom-corn, wheat, rye, barley, oats, grass seed, beans, mixed crops, root crops, cranberries, farm implements, farm buildings, stock, bulls, milch cows, working oxen, fat cattle, horses, sheep, swine, feeding stock, poultry, bees, products of the dairy, fruits, vegetables.

Prize essay on the economy of agriculture, by L. Wetherell.

Addresses to the societies: the use of manures, by Richard S. Fay; rewards of agriculture, by Rev. Geo. E. Ellis; the position of agriculture, by I. H. Wright; the Massachusetts farmer, by Emory Washburn; the economy of scientific agriculture, by Rev. W. Clift; British and American agriculture, by Prof. John A. Nash; the demands of agriculture, by Increase Sumner; the wastes of agriculture, by Geo. S. Boutwell; saving of manures, by Rev. Jas. Richardson; American agriculture, by J. W. Miller; high farming, by R. Morris Copeland.

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Third Report, 1855. 629 pages.

Part I., 189 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; management of State farm at Westborough; special agreement of committee of Board of Agriculture and committee of trustees of State Reform School; reports of committees on State farm, stock, labor, general improvements, crops, fertilizers, etc.; experiments in agriculture; importance of accurate meteorological observations, and plan by Lieutenant Maury; relative to experimental farms; resolutions on death of Dr. T. W. Harris; farm implements, plough, harrow, horse hoe, seed sower, corn planter, mowing machine, horse rake, reaper, thresher; agricultural museum.

Reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex South, Middlesex North, Worcester, Worcester North, Hampshire, Franklin and Hampden, Hampshire, Berkshire, Housatonic, Norfolk County, Plymouth County, Barnstable County.

Agricultural statistics for 1855.

Appendix: returns of societies, finances, analysis of premiums and gratuities; inventory of personal property, stock, crops, tools, etc., cash account of treasurer, State Farm at Westborough; meteorological observations, by John Brooks of Princeton.

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Part II., 440 pages.

Preface. Officers of societies. Exhibitions for 1856.

Reports of committees: farms, reclaimed meadows, improvement of waste lands, orchards, ornamental trees, forest trees, hedges, ploughing, sub-soil ploughing, spading, manures, Indian corn, broom-corn, wheat, rye, oats, root crops, cranberries, essay on the cranberry and its culture, by Rev. B. Eastwood, farm implements, neat stock, horses, swine, poultry, products of the dairy, fruits and flowers, vegetables, domestic manufactures.

Addresses to the societies: chemistry and farming, by Dr. James R. Nichols; the condition of agriculture, by Tappan Wentworth; farming in New England, by William Brigham; the farmer's wants, by Amasa Walker; the farmer's errors, by Solon Robinson; the future of agriculture, by Chas. L. Flint; practical suggestions on farming, by Chas. L. Flint; relations of the East and West, by George S. Boutwell; the farmer, by Julius Rockwell; chemistry of agriculture, by George E. Waring, Jr.; agricultural societies, by Rev. J. M. Merrick.

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Fourth Report, 1856. 829 pages.

Part I., 351 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; agricultural museum; operations at State Farm; grasses, descriptions and illustrations, nutritive value, tables of analyses, influence of seasons, time for sowing grass seed, selection of seed, mixtures of seed, time to cut grass for hay, mowing machines, height of cutting grass, curing of hay, horse rake, hay caps, fall feeding, general treatment of grass lands, top dressing; reports of committees on State Farm, labor, stock, improvements, crops and fertilizers; report on trials of speed of horses, resolutions of Board relative thereto.

Reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Worcester, Worcester South, Hampshire, Franklin and Hampden, Hampshire, Franklin County, Berkshire, Housatonic, Norfolk County, Bristol County, Plymouth County.

Experiments on town farms, circular, reply from overseers of poor of Princeton, remarks.

Appendix: returns of societies, finances, analysis of premiums and gratuities; inventory of stock, crops, tools, etc., cash account of treasurer, State Farm at Westborough; index of systematic names of grasses.

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Part II., 478 pages.

Preface. Officers of societies. Exhibitions for 1857.

Addresses to the societies: early farming of Essex County, by Ben: Perley

Poore; agricultural headwork, by A. R. Pope; the American farmer, by Leverett Saltonstall; sciences applicable to farming, by Dr. Edward Hitchcock; educated farm labor, by Oliver Marcy; the State Farm, by Chas. L. Flint; the culture of fruit, by Marshall P. Wilder; the practical farmer, by Chas. L. Flint.

Reports of committees: farms, reclaimed swamps, orchards, forest trees, hedges, ploughing, manures, Indian corn, wheat, rye, oats, beans, broom-corn, root crops, cranberries, farm implements, dairy stock, neat stock, horses, sheep, swine, poultry, products of the dairy, fruits and flowers, vegetables, domestic manufactures.

Essay on destruction of insects injurious to vegetation, by Samuel P. Fowler.

Meteorological observations, by John Brooks of Princeton.

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Fifth Report, 1857. 708 pages.

Part I., 329 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; usefulness of agricultural exhibitions; meeting to consider expediency of a new State agricultural society, minutes and resolutions; special meeting Board of Agriculture; State cattle show and agricultural fair at Boston, reports on improved Short-horns, North Devons, Ayrshires, Herefords, Jerseys, grade or native stock, milch cows, working oxen, fat cattle, calves, thoroughbred horses, roadsters, horses for general utility, sheep, swine, poultry, agricultural products, fruits, the dairy, agricultural implements, wine, entomology; cotton-seed cake and meal; reports of committees on State Farm, labor, crops, stock, improvements; the library and museum.

Reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Middlesex South, Worcester County West, Worcester North, Worcester South, Worcester, Hampshire, Franklin and Hampden, Hampshire, Eastern Hampden, Franklin County, Berkshire, Norfolk County, Bristol County, Plymouth County, Barnstable County, Nantucket.

Appendix: catalogue of agricultural library in secretary's office; inventory of stock, crops, tools, etc., personal property, cash account of treasurer, State Farm at Westborough; returns of societies, finances, analysis of premiums and gratuities.

Index.

Part II., 379 pages.

Preface. Officers of societies.

Addresses to the societies: the farmer's home and its embellishments, by E. G. Kelley; agricultural heartwork, by Charles Babbidge; articles of food, by E. F. Sherman; agriculture in its relations to the sciences, by Geo. M. Preston; how to be better farmers, by Prof. John A. Nash; the farmer's position, by Justus Tower; farming in some of its intellectual aspects, by Alvan Lamson; system of agricultural education, by Geo. S. Boutwell; forethought in farming, by A. B. Whipple.

Reports of committees: farms, farm accounts, reclaimed swamps, improvement of waste lands, orchards, manures, wire fences, Indian corn, wheat, rye, barley, oats, broom-corn, Chinese sugar cane, root crops, farm implements, neat stock, horses, sheep, poultry, bee culture, the dairy, fruits and flowers, vegetables, maple sugar.

Inquiries in relation to experimental farming, by Wilson Flagg.

Artificial planting of trees: its importance and benefits, by Rev. John L. Russell.

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Sixth Report, 1858. 639 pages.

Part I., 283 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; operations of Board upon State Farm at Westborough.

Reports of committees: on continuation of contract with State Farm; the potato rot; collecting and publishing information in agriculture; uniformity of action in awarding premiums; institute meetings.

Resolutions on death of Hon. Moses Newell; statistical and other information on Indian corn; the State cabinet.

Reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Middlesex South, Worcester, Worcester County West, Worcester North, Worcester South, Hampshire, Franklin and Hampden, Hampshire, Eastern Hampden, Berkshire, Housatonic, Norfolk County, Bristol County, Barnstable County, Nantucket, National Horse Show at Springfield.

Appendix: agricultural museum, catalogue of stratified and unstratified rocks, birds, shells, insects, animals, fishes; inventory of stock, crops, tools, etc., State Farm at Westborough; account of treasurer of State fair; returns of societies, finances, analysis of premiums and gratuities.

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Part II., 356 pages.

Preface. Officers of societies. Exhibitions for 1859.

Addresses to the societies: the duties and opportunities of an agricultural society, by Dr. George B. Loring; the farmer and his aids, by Ralph Waldo Emerson; the farmer and the man, by Frederic Hinckley; taste and common sense in farming, by Emory Washburn; profits of farming, by John C. Bartlett; New England farming, by Dr. George B. Loring; agriculture and its relations to American industry, by N. P. Banks; the laws of vegetation, by Oliver Marcy; the social and civil position of the farmer, by Dr. George B. Loring; national industry, the true source of national greatness, by John S. Eldridge.

Reports of committees: farms, reclaimed meadows, improvement of pasture lands, under-draining land, orchards, ploughing, manures, Indian corn, wheat, rye, barley, oats, broom-corn, cranberries, beans, root crops, farm implements, neat stock, feeding stock, horses, sheep, swine, poultry, products of the dairy, fruits and flowers.

Essays: on the mangold wurzel, by John Tynan; on fairs, by A. W. Dodge.

Index.

Seventh Report, 1859. 575 pages.**Part I., 247 pages.**

Roster Board of Agriculture.

Introduction by Secretary Flint; expiration of contract with State Farm.

Reports of committees: on application of manures; renovation of exhausted pastures; cattle husbandry; diseases of vegetation; general fruit culture, thorough drainage and proper preparation of soil, appropriate soil and location, climatic and meteorological agencies, manures and their application, importance of producing from seed new and improved varieties suited to each locality, pear upon quince stock, preservation and ripening of fruit, diseases and insects injurious to vegetation, profits of fruit culture, pruning; culture of the grape; root crops; market days; encouragement of farmers' clubs; agricultural education.

The agricultural museum; pleuro-pneumonia.

Reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex North, Middlesex South, Worcester, Worcester County West, Worcester North, Worcester South, Hampshire, Franklin and Hampden, Hampshire, Highland, Eastern Hampden, Franklin County, Berkshire, Housatonic, Norfolk County, Bristol County, Plymouth County, Barnstable County, Nantucket, Martha's Vineyard.

Appendix: catalogue of plants; inventory of personal property, stock, tools and implements, treasurer's report, State Farm at Westborough; returns of societies, finances, analysis of premiums and gratuities.

Index.

Part II., 328 pages.

Officers of societies.

Addresses to the societies: observation and experiment, by J. J. H. Gregory; agriculture in the public schools, by Rufus P. Stebbins; the duty of the farmer to his calling, by George S. Boutwell; agricultural education, by Dr. George B. Loring; the use of mind in farming, by T. T. Waterman; the farmer, as he was, is, and is to be, by E. W. B. Canning; progress of farming, by Henry W. Bishop; dignity of labor, by Henry F. Durant.

Reports of committees: farms, reclaimed lands, under-draining, orchards, ploughing, manures, Indian corn, wheat, barley, oats, root crops, farm implements, neat stock, cattle breeding in Norfolk County, milch cows, Jerseys, Devons, Shorthorns, working oxen, fat cattle, horses, sheep, swine, poultry, dairy products, fruits.

Plan for investigating the potato disease, by Wilson Flagg.

Horse and ox shoeing, by David Stiles, Jr.

Appendix: general statutes relating to agriculture.

Index.

Eighth Report, 1860. 586 pages.**Part I., 344 pages.**

Roster Board of Agriculture.

Introduction by Secretary Flint; memorial to Board of Agriculture concerning pleuro-pneumonia; report of commissioners appointed for

extirpation of disease among cattle called pleuro-pneumonia; laws concerning contagious diseases among cattle; report of board of medical examiners, morbid anatomy, history and pathology, herds affected, contagion, incubation, propagation, symptoms, treatment, average fatality, prevention.

Reports of committees: to advise with and assist commissioners for extirpation of pleuro-pneumonia; sheep husbandry, statistics, breeds, cross breeding, summer and winter treatment, diseases; diseases of vegetation; root crops; horses, roadster, draught horse, use and breeding, breeds, rules for horse breeders, stable, food, grooming, training, shoeing, education, soundness, age, diseases, statistics, ass, mule; flowage of low lands, compulsory out-falls, land drainage companies; weight of crops entered for premium.

The State cabinet. Harris's "Treatise on insects injurious to vegetation."

Reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Middlesex South, Worcester, Worcester County West, Worcester North, Worcester South, Worcester Southeast, Hampshire, Highland, Eastern Hampden, Franklin County, Berkshire, Housatonic, Hoosac Valley, Norfolk County, Plymouth County, Barnstable County, Nantucket, Martha's Vineyard.

Appendix: returns of societies; finances, analysis of premiums and gratuities.

Part II., 242 pages.

Officers of societies.

Addresses to the societies: agriculture an art, by John L. Russell; succession of forest trees, by Henry D. Thoreau; the stock on our farms, by Dr. George B. Loring; why a Massachusetts farmer should be content, by George S. Hillard.

Reports of committees: farms, reclaimed meadows, improving pasture and waste lands, orchards, ploughing, manures, Indian corn, wheat, rye, barley, oats, broom-corn, root crops, comparative value of crops as food for cattle, neat cattle, horses, sheep, poultry, the dairy, bee culture.

Indexes. Errata.

Ninth Report, 1861. 597 pages.

Part I., 286 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint.

Reports of committees: diseases of vegetation; cattle breeding and feeding (illustrated), breeding the female for the dairy and for beef, the bull, pure blood, New England cattle for mixed purposes, methods of rearing, animal structure, cost and quantity of food, soiling, steaming, amount of food furnished by various crops, selection and comparison of breeds; protection of sheep, lambs, etc., number of dogs, tax paid; wastes of the farm; wheat culture; pleuro-pneumonia.

The State cabinet; animals of Massachusetts (illustrated), catalogue of animals extinct in this State, additions to cabinet, by E. A. Samuels; Harris's "Insects injurious to vegetation;" "Manual of agriculture;" agricultural statistics.

Reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex North, Middlesex South, Worcester, Worcester County West, Worcester North, Worcester South, Worcester South-east, Hampshire, Franklin and Hampden, Hampshire, Highland, Hampden, Eastern Hampden, Franklin County, Berkshire, Housatonic, Hoosac Valley, Norfolk County, Bristol County, Plymouth County, Barnstable County, Nantucket, Martha's Vineyard.

Appendix: returns of societies; finances, analysis of premiums and gratuities.

Index.

Part II., 311 pages.

Officers of societies.

Addresses to the societies: education of farmers' sons, by Alfred A. Abbott; influence of agriculture, tenure of lands, by Emory Washburn; agriculture and war, by Dr. George B. Loring; the farmer's calling, by J. N. Dunham; utility of birds, by Wilson Flagg; on the cultivation of cranberries, by Nathan Page, Jr.; preservation of apples and other winter fruits, by Austin J. Roberts.

Reports of committees: farms, pasture and waste lands, culture of trees, vineyards, manures, muck and its uses, Indian corn, small grains, stock, feeding of stock, sheep, fruits, apple trees and apples, wine-making, bread.

Agricultural statistics for 1860.

Index.

Tenth Report, 1862. 691 pages.

Part I., 424 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; report of commissioners on contagious diseases among cattle, report of committee to prepare address to farmers upon existence of pleuro-pneumonia, statement of board of commissioners.

Reports of committees: manures, results of experiments; culture of tobacco as an agricultural product; fruit culture, catalogue of fruits; cultivation of the grape in Massachusetts, soil, aspect, manures, preparation of soil, planting, distance apart, pruning, propagation, raising new varieties from seed, hybridizing or crop fertilization, profits; increasing efficiency of State Board of Agriculture.

The sheep law, tables showing cities and towns, number dogs licensed, amount received; secretary appointed delegate to International Exhibition at Hamburg; paper on insects of Massachusetts which are beneficial to agriculture (illustrated), by F. G. Sanborn; a trip to Europe, by Chas. L. Flint.

Reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex South, Worcester South-east, Hampshire, Franklin and Hampden, Highland, Franklin County, Eastern Hampden, Berkshire, Housatonic, Norfolk County, Plymouth County, Barnstable County, Nantucket, Martha's Vineyard.

Appendix: returns of societies; finances, analysis of premiums and gratuities.

Index.

Part II., 267 pages.

Officers of societies. Exhibitions for 1863.

Addresses to the societies: the relations of agriculture to man, by George J. L. Colby; agriculture as a national industry, by Dr. George B. Loring; the productiveness of the earth, by A. N. Arnold; advantages of rural pursuits, by Benjamin F. Thomas; agricultural hall, Barnstable, by George Marston.

Reports of committees: farms, waste lands, manures, trees and shrubs, fruit culture, grain crops, root crops and vegetables, milch cows, horses, sheep, swine, the dairy, farm buildings (illustrated).

Essay on successful agriculture, by Jabez Fisher.

Index.

Eleventh Report, 1863. 623 pages.

Part I., 368 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; report of commissioners on contagious diseases among cattle, pleuro-pneumonia, communication to Governor Andrew.

Public winter meeting of Board at Springfield: lecture on agricultural education, by Dr. George B. Loring; discussion on soils and agricultural resources of Massachusetts; lecture on the application of manures, by Prof. S. W. Johnson; discussion on grape culture; discussion on farm crops; discussion on cattle breeding; discussion on sheep husbandry.

Annual meeting: reports of committees: the establishment of a New England agricultural society; resolutions concerning Agricultural Collège; profit of growing meat; preparation of lands for crops; application of manures; the library; culture of the cranberry, soil, drainage and water, insects, profits.

The State cabinet; report on the International Exhibition at Hamburg and the agricultural schools in Europe, by Chas. L. Flint; management of the flax crop; experiments at Rothamsted.

Reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Middlesex South, Worcester County West, Worcester North, Worcester South-east, Hampshire, Franklin and Hampden, Highland, Eastern Hampden, Franklin County, Housatonic, Hoosac Valley, Bristol County, Plymouth County, Nantucket, Martha's Vineyard.

Appendix: returns of societies, finances, analysis of premiums and gratuities; ornithology of Massachusetts, list of species, by E. A. Samuels.

Index.

Part II., 255 pages.

Preface. Officers of societies. Exhibitions for 1864.

Addresses to the societies: elements of success in farming, by Daniel Saunders, Jr.; the model productive State, by Alexander H. Bullock; New England farming, by Luther H. Tucker; the farmer's life, by

Joseph Vaill; most profitable farm stock, by Sanford Howard; the farmer and the Commonwealth, by S. P. Twiss; the farmer, by Rev. George Putnam, D.D.

Reports of committees: farms, manures, fruits, grain and root crops, flax, blood stock, milch cows, raising calves, horses, sheep, the dairy, bee culture.

Essays: on farm accounts, by J. H. Bourne; on plan of a barn, by Joseph Hayward.

Index.

Twelfth Report, 1864. 491 pages.

Part I., 316 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; report of commissioners on contagious diseases among cattle, minority report.

Public winter meeting of Board at Greenfield: opening address, by Dr. George B. Loring; remarks on agricultural education, by His Excellency John A. Andrew; discussion on the corn crop; lecture on grape culture, by E. W. Bull; discussion on improvement of pasture lands; address on soils, by Prof. William B. Rogers; discussion on cattle husbandry; lecture on habits of insects in their relations to man, by F. G. Sanborn; discussion on sheep husbandry; lecture on origin of agricultural soils, by Prof. Louis Agassiz.

Annual meeting: reports of committees: garden vegetables and root crops, onions, cabbage, squash; cultivation of the pitch pine on the sea coast; farm buildings, the New England farm-house, foundation, architecture, general principles, water, barns; fruit culture; adipocere; Agricultural College; the Percheron horse; grape culture, soil, planting, cost of vineyards, errors in propagation.

The State cabinet and agricultural library; the Agricultural College; New England Agricultural Society.

Appendix: reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Middlesex South, Worcester, Worcester County West, Worcester North, Worcester South, Worcester South-east, Hampshire, Franklin and Hampden, Franklin County, Eastern Hampden, Berkshire, Housatonic, Hoosac Valley, Norfolk County, Bristol County, Barnstable County, Nantucket, Martha's Vineyard.

Returns of societies; finances, analysis of premiums and gratuities.

Index.

Part II., 175 pages.

Preface. Officers of societies. Exhibitions for 1865.

Addresses to the societies: agriculture and the industrial arts, by Darwin E. Ware; the interests of agriculture, by John A. Goodwin; the soil of New England, by George F. Works; the education of the ox, by A. B. Davis; distribution of neat cattle in United States, by C. L. Flint.

Reports of committees: farms, manures, vineyards, grain crops, roots and vegetables, milch cows, horses, sheep husbandry, poultry, fruits, bread.

Index.

Thirteenth Report, 1865-66. 533 pages.

Part I., 398 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; report of commissioners on contagious diseases among cattle; report on contagiousness of pleuro-pneumonia, pathological anatomy, period of incubation, by Dr. E. F. Thayer.

Public winter meeting of Board at Worcester: opening address by Dr. George B. Loring; lecture on the State farms should constitute great breeding establishments for some one exclusive, distinct, pure-bred class of stock, by Chas. L. Flint; lecture on agriculture as an employment, its dignity and requirements, by Prof. P. A. Chadbourne; discussion on diseases of animals; lecture on agricultural value of birds, by E. A. Samuels; report on sheep raising, by Edward M. Gardner; lecture on adaptation of plants to the world, to soil, climate, etc., by Prof. P. A. Chadbourne; lecture on meteorology, by F. L. Capen; address on grape culture, seedlings, soil, aspect, planting, propagation, grape growing profitable, by E. W. Bull; lecture on the political economy of agriculture, by Prof. John Bascom.

Annual meeting: reports of committees: manures and their application; drainage; woodlands and forest trees; fruit culture; relative value of milk; the dairy; farm accounts; raising and preservation of seeds; agricultural survey of the State, counties of Nantucket, Dukes, Plymouth, Middlesex, Worcester, Worcester North, Worcester South, Hampshire, Hampden, Franklin, Berkshire; report on the grape; diseases of swine.

The State cabinet and agricultural library; the cattle plague.

Appendix: report of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Middlesex South, Worcester North, Worcester South, Worcester South-east, Hampshire, Franklin and Hampden, Hampshire, Highland, Eastern Hampden, Franklin County, Berkshire, Housatonic, Norfolk County, Bristol County, Plymouth County, Barnstable County, Martha's Vineyard.

Returns of societies; finances, analysis of premiums and gratuities.

Index.

Part II., 135 pages.

Preface. Officers of societies. Exhibitions for 1866.

Reports of committees: farms, reclaimed lands, orchards, manures, grain crops, root crops, cranberries, milch cows, the dairy, horses, sheep.

Agricultural statistics for 1865.

Index.

Fourteenth Report, 1866-67. 525 pages.

Part I., 374 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; report of commissioners on contagious diseases among cattle.

Public winter meeting of Board at Salem: lecture on the connection of the State Board of Agriculture with the Massachusetts Agricultural College, by Dr. George B. Loring; discussion on agricultural education; remarks on varieties in plants, by Prof. P. A. Chadbourne and Prof. Louis Agassiz; lecture on cattle husbandry, by Prof. Louis Agassiz; lecture on grape culture, by E. W. Bull; discussion on root and other field crops; discussion on fruit culture; lecture on what chemistry has accomplished for agriculture, by Dr. James R. Nichols.

Annual meeting: reports of committees: culture of chicory; the management of agricultural fairs; plants as an indication of the nature of the soil; adaptation of crops to soils; transplanting fruit and forest trees; culture of the cranberry; agriculture of Worcester South, of Middlesex North, of Middlesex South, of Western Hampshire, of Bristol County; the dairy; peat fuel, what is peat? use of as fuel, old process of preparing, machines for preparing, economical advantages of peat fuel, other uses, quantity of peat fuel per acre, methods of testing quality of peat fuel.

Essay on pasture lands, by John Johnson, Jr.; essay on agricultural education, by C. O. Perkins; removal of the State cabinet to the Agricultural College.

Appendix: returns of societies; finances, analysis of premiums and gratuities.

Index.

Part II., 151 pages.

Preface. Officers of societies. Exhibitions for 1867.

Reports of committees: farms, farm buildings, improvement of pastures, reclaiming swamp lands, orchards, vineyards, manures, hedges, grain crops, root crops, cranberries, stock, milch cows, working oxen, horses, sheep, swine, poultry, the dairy.

Essays: bread and bread making, by Dr. James R. Nichols; the preservation of fruit and the construction of fruit houses, by Robert Manning.

Appendix: abstract of annual report of trustees of Agricultural College.

Index.

Fifteenth Report, 1867-68. 592 pages.

Part I., 368 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; report of commissioners on contagious diseases among cattle.

Public winter meeting of Board at Concord: address on agricultural progress, by E. W. Bull; discussion on cattle husbandry; address on the Agricultural College, by Prof. Levi Stockbridge; discussion on cattle husbandry continued; discussion on fruit culture; discussion on ploughing; lecture on the agricultural features of the Amazon, by Prof. Louis Agassiz; discussion on ploughing continued; lecture on manures, by Alexander Hyde; discussion on drainage.

Annual meeting: reports of committees: the Agricultural College; hedges and farm fences; manure and its application, muck, plaster of Paris a manure, is salt manure? green crops ploughed under for manure,

is lime manure? is gas lime manure? ashes are manure, is drainage manure? is irrigation manure? the hay crop; specialties in farming; apple culture, old orchards, young orchards, transplanting, varieties; drainage; fall and spring ploughing; night soil; improvement of stock.

The fairs of 1867, with illustrations.

Appendix: reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Middlesex South, Worcester North, Worcester South-east, Hampshire, Franklin and Hampden, Hampshire, Hampden, Eastern Hampden, Franklin County, Housatonic, Hoosac Valley, Norfolk County, Bristol County, Bristol Central, Plymouth County, Barnstable County, Nantucket, Martha's Vineyard.

Returns of societies; finances, analysis of premiums and gratuities.

Index.

Part II., 224 pages.

Preface. Officers of societies. Exhibitions for 1868.

Addresses to the societies: what to do with the farm, by R. H. Seeley; aids to farming, by Simon Brown; farming as a business, by George E. Towne; elements of success, by C. O. Perkins; culture and social position, by Alexander Hyde; the agricultural society, by Dr. George B. Loring.

Reports of committees: farms, improving pasture and waste lands, reclaiming swamp lands, orchards and fruits, cultivation of the pear, fruits, grape vineries, cranberries, forest trees and shrubs of Hingham, general crops, grain crops, root crops, flowers, manures, agricultural implements, ploughing and draining, stock, milch cows, thoroughbred bulls, fat cattle, horses, sheep, swine, poultry, dairy products.

Index.

Sixteenth Report, 1868-69. 663 pages.

Part I., 415 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; report of commissioners on contagious diseases among cattle; report of National Convention at Springfield, Ill.; Texas cattle disease, theories, symptoms, post-mortem appearances, treatment after symptoms.

Public winter meeting of Board at Amherst: lecture on the work and the wants of the college, by President W. S. Clark; report of committee on plan of a barn for the college; lecture on fruit, by J. F. C. Hyde; lecture on commercial fertilizers, by M. C. Weld; lecture on the principles involved in the preservation of meats, by John Gamgee; lecture on how to make farming profitable, by William Clift; lecture on the origin of the agricultural soil, by Prof. Louis Agassiz; lecture on the dairy and its products, the exports, English productions and imports from Holland, cheese consumption, etc., dairying as a specialty, feeding stock for dairy, recent improvements in factory buildings, etc., utilizing whey, butter making, butter factories, by X. A. Willard; lecture on the hay crop, by Alexander Hyde; lecture on the art of agriculture, by Prof. Levi Stockbridge; lecture on the value of agri-

cultural investigation, and the ability of Massachusetts to support the Agricultural College, by Dr. George B. Loring.

Annual meeting: reports of committees: amending soils by mechanical means; cultivation of cereals, wheat, barley, rye, oats, buckwheat, Indian corn; the Agricultural College; small fruit culture; commercial manures; the relation of manufactures to agriculture; farming as an occupation, its advantages as compared with other business; the best method of feeding dairy stock; the potato crop.

Trial of ploughs at Amherst, with illustrations.

Appendix: reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex North, Middlesex South, Worcester, Worcester County West, Worcester North-west, Worcester North, Worcester South, Worcester South-east, Hampshire, Franklin and Hampden, Hampshire, Highland, Hampden, Eastern Hampden, Union, Franklin County, Berkshire, Hoosac Valley, Norfolk County, Hingham, Bristol County, Bristol Central, Plymouth County, Marshfield, Barnstable County, Nantucket, Martha's Vineyard.

Returns of societies; finances, analysis of premiums and gratuities.

Part II., 248 pages.

Preface. Officers of societies. Exhibitions for 1869.

Addresses to the societies: history of the Essex Agricultural Society, by Dr. George B. Loring; education in agriculture, by Thomas Hill; American labor and its position, by Daniel Needham; relation of agriculture to the State, by Richard Goodman; future prospects of American agriculture, by Dr. George B. Loring; intellect in farming, by Alexander Hyde.

Essay on the pests of the farm, mammals, birds, insects, by E. A. Samuels.

Reports of committees: farms; improvement of meadow and swamp lands; manures; orchards and fruits; hedges; forest trees; cranberry meadows; grain crops; root crops; domestic wines, foreign grapes and foreign wine, American grapes, a few suggestive facts or rules to be regarded in manufacture of wines, what are our resources for wine-making, how to make the best grape wine either from cultivated or wild grapes, blackberry wine, how to make currant wine, elderberry wine, cider or apple wine, rhubarb wine, whortleberry wine, orange wine; farm implements; milch cows; stock; horses; sheep; swine; poultry, quality of stock, select varieties, coop or hennery, food, feeding, laying, soft eggs, how many hens to keep, sitting, nest, brooding, sex of eggs, hatching, chickens, diseases; dairy products.

Appendix: abstract of annual report of trustees of Agricultural College. Indexes.

Seventeenth Report, 1869-70. 659 pages.

Part I., 331 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; report of commissioners on contagious diseases among cattle.

Public winter meeting of Board at Pittsfield: opening address by Alex-

ander Hyde; address of Richard Goodman; lecture on salt and its uses in agriculture, our modes of manufacture, by Dr. C. A. Goessmann; discussion on mineral manures; lecture on the obstacles to the progress of scientific agriculture, by Prof. P. A. Chadbourne; lecture on fruit culture, thinning, preservation and ripening, methods for producing new native fruits, by Marshall P. Wilder; lecture on fish breeding, by Prof. Louis Agassiz; lecture on the rotation of crops, by Prof. Levi Stockbridge; lecture on the farmer and the college, by Dr. George B. Loring.

Annual meeting: communication relative to holding of farmers' institutes; reports of committees: preparation of the soil and planting of the seed; breeding and training of horses; the Agricultural College; clover as a fertilizer; the use of muck; climate as affected by soil and location; fruit culture, varieties.

Paper on new or little known injurious insects (illustrated), insects injuring the apple, cherry, cranberry vine, currant, raspberry, oak, pine, ornamental shrubs, garden vegetables, etc., plant house insects, by Dr. A. S. Packard, Jr.

Appendix: reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Worcester, Worcester County West, Worcester North, Worcester North-west, Worcester South, Worcester South-east, Hampshire, Franklin and Hampden, Hampshire, Highland, Hampden, Eastern Hampden, Union, Franklin County, Housatonic, Norfolk County, Bristol Central, Hingham, Marshfield, Martha's Vineyard.

Returns of societies; finances, analysis of premiums and gratuities.

Part II., 323 pages.

Preface. Officers of societies. Exhibitions for 1870.

Addresses to the societies: experience of a practical farmer, by B. P. Ware; legislative aids to agriculture, by Benjamin F. Butler; plant life, by Eliphalet Stone; the relations of soil culture to soul culture, by Rev. Washington Gladden; agricultural fairs and their purposes, by Prof. John Bascom; opportunities of the New England farmer, by Richard Goodman; the farmer's conflict, by Dr. George B. Loring; agriculture in Massachusetts, by Warren A. Durant.

Reports of committees: farms; improvement of meadow and swamp lands; manures; orchards and vineyards; grain crops; root crops; vegetables; fruits; cranberry meadows; farm implements; stock; sheep; poultry, general shape of all Brahmas, coops; dairy products.

Prize essays on roads and road making: the science of road making (illustrated), Part II., on the best methods of superintending the construction and repair of public roads in this Commonwealth, by Clemens Herschel; appendix, recent expressions of public opinion on the subject of better roads and road management, "Boston Daily Advertiser"; extracts from report of committee on appointment of road engineer, to Newton town meeting; the construction and repair of roads (illustrated), by Samuel F. Miller; the maintenance and repairs of common roads, by Henry Onion.

Indexes.

Eighteenth Report, 1870-71. 736 pages.

Part I., 456 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; report of commissioners on contagious diseases among cattle, foot and mouth disease.

Public winter meeting of Board at Framingham: address on the Board of Agriculture, by Marshall P. Wilder; lecture on roads and road making, counties of Barnstable, Berkshire, Bristol, Dukes, Essex, Franklin, Hampden, Hampshire, Middlesex, Nantucket, Norfolk, Plymouth, Suffolk and Worcester, summary, by Chas. L. Flint; lecture on the principles of breeding, ovum and developmental changes, membranes and nutrition of fœtus, analysis of uterine milk, causes of sterility, fundamental principles of breeding, influence of sire and dam on progeny, breeding of males as a specialty, regulating sexes of offspring, summary, foot and mouth disease, by Prof. James Law; lecture on markets for the farmer, by Avery P. Slade; lecture on New England homes, by Prof. Albert Hopkins; lecture on manures, general and special, by Dr. James R. Nichols; lecture on field culture of roots and vegetables, soil and its preparation, manure and its application, sowing or planting seed, tools, quantity of seed to acre, after-cultivation, gathering crops, varieties of crops, cost of production, by James J. H. Gregory; lecture on fruit culture, by John B. Moore; lecture on California, a comparative review of her climate, resources and progress, with observations made in a recent tour to the Pacific coast, by Marshall P. Wilder.

Annual meeting of Board: essay on nature's mode of distributing plants, by Prof. W. S. Clark; report of examining committee of Agricultural College; essay on market gardening, rotation of crops in garden culture, by John B. Moore; report on value of a regular system of farm accounts; essay on the use of capital in farming, by N. S. Hubbard; essay on time of cutting and mode of curing hay, by John Johnson; report in memory of James Thompson; report on culture and preservation of fruits; report on injurious and beneficial insects of Massachusetts (illustrated), importance to agriculturists of a knowledge of insects, insects affecting the currant, apple, grape, field crops, shade and forest trees, beneficial insects, by Dr. A. S. Packard, Jr.

Appendix: reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Middlesex South, Worcester, Worcester County West, Worcester North, Worcester North-west, Worcester South, Worcester South-east, Hampshire, Franklin and Hampden, Highland, Eastern Hampden, Union, Franklin County, Berkshire, Hoosac Valley, Housatonic, Norfolk County, Bristol Central, Hingham, Marshfield, Nantucket, Martha's Vineyard, Hampden.

Returns of societies; finances, analysis of premiums and gratuities.

Part II., 280 pages.

Preface. Officers of societies. Exhibitions for 1871.

Addresses to the societies: American mania for large farms, by Benjamin

F. Butler; decline of New England agriculture, by Alvah Crocker; cattle husbandry, by Richard Goodman; woman and home science, by H. W. Parker; American and European homes, by J. F. Moors; mutual dependence of our producing industries, by Prof. Levi Stockbridge; professional education the present want of agriculture, by Prof. W. S. Clark; the farmer's advantage, by A. L. Perry; agriculture in Europe, by Charles G. Davis.

Reports of committees: farms, under-drainage, reclaimed meadows, renovated pastures, apple orchards, vineyards, fruits, canker worm, cranberry meadows, Indian corn, vegetables, stock, pedigrees of stock, heifers, horses, sheep, poultry, the dairy.

Supplement: abstract of annual report of trustees of Agricultural College: catalogue of trustees, overseers and faculty, course of study and instruction, summary of meteorological observations for 1870; report on production of beet sugar as an agricultural enterprise in Massachusetts, home resources, cultivation of sugar beets, selection of varieties, soil, planting of seed and treatment, yield of beets, yield of juice and sugar, composition of beet sugar molasses, cellular residue of beet root, produce of leaves, influence of sugar beet cultivation on condition of soil, by Dr. C. A. Goessmann.

Indexes.

Nineteenth Report, 1871-72. 764 pages.

Part I., 429 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; seeding grass land.

Public winter meeting of Board at Fall River: opening address by Dr. Nathan Durfee; discussion on preparation and seeding down of land; lecture on Utah and the Mormons, by Prof. P. A. Chadbourne; lecture on food of plants, and sources of supply, by Dr. James R. Nichols; discussion on farm and garden vegetables; lecture on the horticultural education of women, by Mrs. Ednah D. Cheney; lecture on the principles of breeding, by Chas. L. Flint; discussion on fruit culture; lecture on what modern society owes to science, by Dr. George B. Loring.

Report of commissioners on contagious diseases among cattle; foot and mouth disease, symptoms, treatment, contagion.

Annual meeting of Board: essay on management of the dairy, milking, winter feeding, roots, carding, drying off a cow, care during time of calving, products of the cow, by John T. Ellsworth; essay on fruit culture, influence of warm, dry seasons, draining of fruit lands, preparation and cultivation of soil, manures and their application, mulching, thinning, shelter, insects and diseases, by Marshall P. Wilder; report of examining committee of Agricultural College; report on agricultural and horticultural education for women; paper on agriculture of Eastern Hampshire, by Prof. Levi Stockbridge; report on injurious and beneficial insects of Massachusetts, insects injurious to field crops, to the raspberry, to forest trees (illustrated), by Dr. A. S. Packard, Jr.; the county societies.

Appendix: report of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex South, Middlesex North, Worcester, Worcester County West, Worcester North, Worcester North-west, Worcester South-east, Hampshire, Franklin and Hampden, Hampshire, Highland, Hampden, Eastern Hampden, Union, Franklin County, Deerfield Valley, Berkshire, Hoosac Valley, Housatonic, Norfolk County, Hingham, Bristol County, Bristol Central, Plymouth County, Marshfield, Barnstable County, Nantucket, Martha's Vineyard.

Returns of societies; finances, analysis of premiums and gratuities.

Part II., 335 pages.

Preface. Officers of societies. Exhibitions for 1872.

Addresses to the societies: progress in agriculture, by Thomas Allen; progressive farming, by Joseph S. Howē; our soil, our climate, our crops, by Prof. Levi Stockbridge; farmers need a higher education, by Henry K. Oliver; utilization of labor, by Prof. P. A. Chadbourne; the needs of New England agriculture, by George E. Waring; the prosperity and power of Massachusetts, by Dr. George B. Loring; nothing new, by Samuel B. Noyes.

Essays: farming as an occupation, by Charles J. Peabody; the utility of birds to agriculture, by F. H. Palmer; improving our society, by Francis H. Appleton; the management of agricultural societies, by J. N. Sturtevant; farming in Hampshire County, by S. C. Thompson; desirable improvements in the agriculture of Hampshire County, by W. Livermore.

Reports of committees: farms, under-draining, fertilizers, orchards, forest trees, fruits, grain crops, tobacco statement, vegetables, root crops, stock, working oxen, sheep, swine, poultry, dairy products, milk, butter, cheese.

Indexes.

Twentieth Report, 1872-73. 606 pages.

Part I., 382 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; census returns, farm machinery.

Public winter meeting of Board at Barre: address of welcome by Thomas P. Root; address by Dr. Charles G. Allen; lecture on dairy husbandry, by Harris Lewis; lecture on the relations of botany to agriculture, by Prof. William S. Clark; lecture on hereditary influence in the improvement of stock, breeding in New England, law of propagation, law of inheritance, physiology in its infancy, difference in inheritance, human and animal physiology; law of propagation defined and illustrated, breeding "in and in," cross-breeding, quality of structure, disease inherited, Darwin's views, vegetable physiology, by Dr. Nathan Allen; lecture on practical questions of law relating to farm property, boundaries, fences, surface water, irrigation, support of soil, easements, sale of personal property, by F. F. Fay; lecture on the catarrhal epidemic, by Dr. D. D. Slade; lecture on manures and fertilizers, by A. H. Ward; lecture on mowing and pasture lands, by Prof. Levi Stockbridge.

Report of commissioners on contagious diseases among cattle.

Annual meeting of Board: report on the injurious and beneficial effects of insects, insects injurious to the strawberry, bean, fruit and forest trees, beneficial insects, by Dr. A. S. Packard, Jr.; essay on the use of steam on the farm, by Prof. Levi Stockbridge; report of examining committee of Agricultural College; essay on the relative value of farming among the occupations of life, by N. S. Hubbard; lecture on the structure and growth of domesticated animals (illustrated), by Prof. Louis Agassiz; introduction of machinery (illustrated).

Appendix: reports of delegates appointed to visit exhibitions of societies: Barnstable County, Berkshire, Deerfield Valley, Essex, Franklin County, Hampden, Eastern Hampden, Hampshire, Hampshire, Franklin and Hampden, Highland, Hingham, Hoosac Valley, Housatonic, Marshfield, Martha's Vineyard, Middlesex, Middlesex North, Middlesex South, Nantucket, Norfolk County, Plymouth County, Union, Worcester, Worcester North, Worcester South, Worcester South-east, Worcester County West.

Returns of societies; finances, analysis of premiums and gratuities.

Part II., 224 pages.

Preface. Officers of societies. Exhibitions for 1873.

Addresses to the societies: what shall we raise? by William D. Northend; New England farming, by Dr. George B. Loring; the relation of agriculture to manhood, by C. W. Emerson; does farming pay? by Prof. Levi Stockbridge; resources of Massachusetts, by William Claflin; unity of interests, by Eliphalet Stone; New England home life, by Prof. P. A. Chadbourne; how farmers can improve their present condition, by Sanborn Tenney.

Essays: education and agriculture, by Hosah G. Goodrich; the cost of a crop of corn to the Massachusetts farmer, by Dr. E. Lewis Sturtevant; our forests, by L. B. Caswell; South Carolina phosphates, by R. N. Oakman.

Reports of committees: manures, farms, reclaiming swamp lands, destruction of canker worms, hay crop, Indian corn, roots and vegetables, fruits, stock, poultry, dairy products, transplanting forest trees.

Prize essay on insect-eating birds (illustrated), by F. H. Palmer.

Indexes.

Twenty-first Report, 1873-74. 628 pages.

Part I., 476 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint.

Public winter meeting of Board at Fitchburg: address of Capt. E. T. Miles; address of Mayor Norcross; lecture on a hundred years' progress of American agriculture, before the Revolution, first cattle in New England, treatment of cattle, beginning of grass culture, early farm implements, ploughs, early modes of cultivation, wheat, rye and barley, cultivation of fruit, restrictions on colonial agriculture, organized effort, public exhibitions, cast iron used, the harrow, smaller farm tools, making

and gathering hay, grain separators, the king of cereals, wheat culture, the potato, the cotton supply, the hay crop, improvement of stock, frequent importations, the dairy interest, the packing business, the wool interest, American horses, our agricultural literature, what science has done, commercial fertilizers, by Chas. L. Flint; lecture on milk, by Harris Lewis; lecture on the importance, progress and influence of rural pursuits, by Marshall P. Wilder; lecture on some home resources of fertilizers, with particular reference to nitrogen plant-food, properties of nitrogen and its relation to plant life, natural resources of nitrogen plant-food, with reference to their agricultural value, by Dr. C. A. Goessmann; lecture on the circulation of sap in plants, observations on pressure of sap (illustrated), by Prof. W. S. Clark; discussion on the management of grass lands; lecture on the structure and growth of domesticated animals, by Prof. Louis Agassiz; lecture on the humane destruction of animals (illustrated), by Prof. D. D. Slade; lecture on the breeding and feeding of stock, by Dr. George B. Loring; description, management, stock, crops, products, expenses and profits of the farm of the State Primary School, by Dr. H. P. Wakefield; lecture on grape culture in Massachusetts, by Dr. Jabez Fisher; lecture on the demands of agriculture on veterinary science, and the means of its accomplishment, by Dr. Noah Cressy.

Report of commissioners on contagious diseases among cattle.

Annual meeting of Board: report of examining committee of Agricultural College; report of State inspector of fertilizers, commercial fertilizers, Peruvian guano, fish scraps and fish guano, animal dust, ground bones, bone-black waste, superphosphates and ammoniated superphosphates, crude sulphate of ammonia, crude nitrate of soda, German potash salts, native sulphate of magnesia, by Dr. C. A. Goessmann; essay on milk, some considerations concerning its morphology (illustrated), milk in general, breed variations, Jersey milk, Ayrshire milk, Dutch milk, by Dr. E. Lewis Sturtevant; suggestions relating to agricultural societies, proposed national academies, by J. N. Sturtevant; essay on essentials to agricultural inquiry, by J. N. Sturtevant; resolutions on death of Prof. Louis Agassiz; the farm for boys.

Appendix: reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Middlesex South, Worcester County West, Worcester North, Worcester South, Worcester Southeast, Hampshire, Franklin and Hampden, Highland, Hampden, Eastern Hampden, Deerfield Valley, Union, Franklin County, Berkshire, Hoosac Valley, Housatonic, Norfolk County, Hingham, Bristol County, Bristol Central, Plymouth County, Marshfield, Nantucket, Barnstable County, Martha's Vineyard.

Returns of societies; finances, analysis of premiums and gratuities.

Part II., 152 pages.

Preface. Officers of societies. Exhibitions for 1874.

Addresses to the societies: debt and success, by George S. Boutwell; Chinese agriculture, by Chan Laisun; agriculture from a New England stand-point, by Dr. H. P. Wakefield; agriculture at home and at the

West, by F. P. Brown; farmers' homes: what they were, are and ought to be, by Alexander Hyde; progress in twenty-five years, by Robert M. Copeland.

Essays: foreign agricultural experiences, by Francis H. Appleton; hints and suggestions on managing the farm, by Charles J. Peabody; some thoughts on the management of agricultural societies, by Rev. J. H. Temple; cultivation of the pear, by Abel F. Stevens.

Farming in New England, from the supervisor's report, Plymouth County Agricultural Society.

Reports of committees: experiment with commercial fertilizers, cereals, roots and vegetables, cranberries, stock, Dutch cattle, swine.

Indexes.

Twenty-second Report, 1874-75. 616 pages.

Part I., 476 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint.

Public winter meeting of Board at Westfield: address of welcome by N.

T. Leonard; lecture on milk, by Prof. L. B. Arnold; lecture on the phosphate beds of the Charleston basin, by Chas. L. Flint; report on experiments with fertilizers at the Agricultural College, by Prof. Levi Stockbridge; lecture on winter gardening and glass structures, by William C. Strong; lecture on root crops and their cultivation, root crops, the carrot, turnips, English turnip, by O. B. Hadwen; lecture on the pig as a manure and meat making animal, by Joseph Harris; lecture on the law of inheritance; or, the philosophy of breeding,—introductory, the cell, the sperm, the germ, generation, development, growth, summary, applications, by Dr. E. Lewis Sturtevant; lecture on observations upon the phenomena of plant life (illustrated), by Prof. William S. Clark.

Report of commissioners on contagious diseases among cattle.

Annual meeting of Board: report of examining committee of Agricultural College; essay on best mode of subduing and utilizing for tillage the salt marshes in this State after they are drained, on character and cultivation of some of sea marshes of Europe, on salt marshes above mouth of Green Harbor River in the township of Marshfield, Plymouth County, Mass., by Dr. C. A. Goessmann; essay on the apple, history, propagation, management, transplanting, pruning, insects, harvesting, by H. M. Sessions; report of State inspector of fertilizers, German potash salts, Peruvian guano, fish scraps and fish guano, Navassa phosphate, bone-black waste, ground bones, animal dust, superphosphates, by Dr. C. A. Goessmann; essay on the mental faculties of our domestic animals, by Prof. P. A. Chadbourne.

Appendix: reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex South, Middlesex North, Worcester, Worcester County West, Worcester North-west, Worcester North, Worcester Southeast, Hampshire, Franklin and Hampden, Hampshire, Highland, Franklin County, Eastern Hampden, Union, Deerfield Valley, Berkshire, Housatonic, Hoosac Valley, Norfolk County, Bristol County,

Bristol Central, Plymouth County, Marshfield, Hingham, Barnstable County, Nantucket, Martha's Vineyard.
Returns of societies; finances, analysis of premiums and gratuities, summary.

Part II., 140 pages.

Preface. Officers of societies. Exhibitions for 1875.

Addresses to the societies: capital in farming, by John L. Shorey; the currency, and its effect on the farming interest, by Julius H. Seelye; management of farms, by Richard Lathers; the vocation of farming, by Orville Dewey; how farming pays, by Richard Goodman; the coming farmer, by John Quincy Adams.

Reports of committees: farm improvements, fruit, vineyards, root crops, Indian corn, dairy stock, working oxen, sheep, poultry.

Indexes.

Twenty-third Report, 1875-76. 608 pages.

Part I., 416 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint.

Public winter meeting of Board at Haverhill: opening remarks by Dr. George B. Loring; lecture on experiments in feeding plants, by Prof. Levi Stockbridge; lecture on co-operation among farmers, by Prof. P. A. Chadbourne; lecture on the breeding and management of horses, by Rev. Wm. H. H. Murray; lecture on bowlder rocks, their probable origin and history, and their use in construction of dwellings, by Dr. James R. Nichols; discussion on vegetable culture and market gardening; remarks relative to centennial exhibition, by Leverett Saltonstall; lecture on restoration of the forests, by George B. Emerson, LL.D.; discussion on cattle husbandry; discussion on cultivation of fruits.

Report of commissioners on contagious diseases among cattle.

Annual meeting of Board: report of examining committee of Agricultural College, agricultural scholarships, dairying, cultivation of small fruits, agricultural experiments, raising forest trees, garden seeds; essay on Devon cattle, history, color, English improved, American improved, by H. M. Sessions; essay on agriculture as a life work, by Henry S. Goodale; essay on methods for improvement of fruits, by Marshall P. Wilder; resolutions on death of Hon. Albert Fearing; report on the salt marshes above the mouth of Green Harbor River, in township of Marshfield, Plymouth County, Mass., by Dr. C. A. Goessmann; suggestions on tree planting in Massachusetts, by Prof. C. S. Sargent; essay on mental faculties of domestic animals, by Hebron Vincent; report of State inspector of fertilizers, potash salts, Peruvian guano, fish guano, ground horn and hoof, sulphate of ammonia, mineral phosphates, ground bones, superphosphates, by Dr. C. A. Goessmann.

Brief history of the State Board of Agriculture, by Chas. L. Flint.

Appendix: reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex, Middlesex North, Middlesex South, Worcester, Worcester County West, Worcester North, Worcester North-west,

Worcester South, Worcester South-east, Hampshire, Highland, Hampden, Eastern Hampden, Union, Franklin County, Deerfield Valley, Berkshire, Hoosac Valley, Housatonic, Norfolk County, Bristol County, Marshfield, Plymouth County, Barnstable County, Nantucket, Martha's Vineyard.

Returns of societies; finances, analysis of premiums and gratuities, summary.

Part II., 192 pages.

Preface. Officers of societies. Exhibitions for 1876.

Addresses to the societies: stability of agriculture, by Daniel Needham; some of the poisons of the farmer's life, by Dr. Edward Hitchcock; relations of science to agriculture, by E. C. Bolles; practical hints on farming, by Richard Lathers; the farmer, and his relations to the State, by Sanborn Tenney; the agricultural outlook, by Dr. George B. Loring; Texas cattle disease, by Dr. Noah Cressy; rise of agriculture, by Theodore Lyman.

Essays: reform in the management of agricultural societies, by Francis H. Appleton; chemical corn growing, by Dr. E. Lewis Sturtevant; the culture of the apple, by Abel F. Stevens.

Reports of committees: farm improvements, under-draining land, fruit culture, fruits, renovation of fruit trees, grain crops, grain and grass seed, root crops, manures, dairy stock, dairy products.

Indexes.

Twenty-fourth Report, 1876-77. 575 pages.

Part I., 360 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint.

Public winter meeting of Board at Worcester: opening address by O. B. Hadwen; lecture on fruit and fruit culture, location, varieties, by T. S. Gold; lecture on breeding and management of poultry, by I. K. Feich; lecture on the Colorado potato beetle, journey from plains east of Rocky Mountains to the Atlantic, habits, enemies, remedies, by Dr. A. S. Packard, Jr.; lecture on needs of the Massachusetts dairy farmer, by A. W. Cheever; lecture on the farmer's homestead, and its relation to farm thrift, by Donald G. Mitchell; lecture on manures and chemical fertilizers, by Prof. Levi Stockbridge; lecture on vegetable gardening and root culture, by B. P. Ware.

Report of commissioners on contagious diseases among cattle.

Annual meeting of Board: essay on size and conduct of farms in Massachusetts, by Daniel Dwight; report on improvement of salt marshes, by Dr. C. A. Goessmann; essay on the importance of arboriculture to the agricultural community, by O. B. Hadwen; essay on buds, by Prof. P. A. Chadbourne; report of State inspector of fertilizers, potash fertilizers, ashes of hulls of cotton seeds, refuse salts from gunpowder works, saltpetre waste, waste lime from a gas house, sulphate of ammonia, nitrate of soda, dried blood, wool waste, horn waste, animal

dust, ground bones, bone-black, Peruvian guano, superphosphates, fish and fish guano, by Dr. C. A. Goessmann; essay on art and agriculture, their relations to each other, by Hebron Vincent; the potato beetle.

Facts and figures from census of 1875.

Appendix: reports of delegates appointed to visit exhibitions of societies:

Essex, Middlesex, Middlesex North, Middlesex South, Worcester, Worcester County West, Worcester North, Worcester North-west, Worcester South, Worcester South-east, Hampshire, Franklin and Hampden, Highland, Hampshire, Hampden, Eastern Hampden, Franklin County, Deerfield Valley, Berkshire, Housatonic, Norfolk County, Bristol County, Bristol Central, Plymouth County, Hingham, Marshfield, Barnstable County, Nantucket, Martha's Vineyard.

Returns of societies; finances, analysis of premiums and gratuities.

Part II., 215 pages.

Preface. Officers of societies. Exhibitions for 1877.

Addresses to the societies: the relations of agriculture to civilization, by Cyrus M. Tracy; advantages of New England farm life, by L. F. Mellen; the establishment and growth of agricultural societies, by Horace J. Canfield; changes in Massachusetts agriculture, by George S. Boutwell.

Essays: originating new potatoes, by James J. H. Gregory; comparative value of crops as food for cattle, by Ansel W. Putnam; soiling cattle, by A. L. McKinstry.

Reports of committees: farms, improving wet meadows, improving pasture and waste land, fruit culture, Indian corn, small grains, root crops, vegetables, manures, dairy stock, dairy products, horses, poultry, bread.

Essay on the onion smut (illustrated), by Prof. W. G. Farlow.

Appendix: laws relating to Board of Agriculture; to agricultural societies; requirements of Board of Agriculture.

Agricultural statistics for 1875.

Indexes.

Twenty-fifth Report, 1877-78. 630 pages.

Part I., 408 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; quarter centennial report.

Public winter meeting of Board at Waltham: opening address by John B.

Moore; address of welcome by Rev. Benton Smith; lecture on market gardening and vegetable culture (illustrated), by William D. Philbrick;

lecture on origin and development of cultivated plants, by Prof. P. A. Chadbourne; lecture on the breeding, training and management of horses, by John E. Russell; lecture on the grass and hay crop (illustrated), by Chas. L. Flint; lecture on hybridization in plants, by Prof. George L. Goodale; lecture on the management of night soil, by Gen. N. N. Halsted; lecture on diseases of fruit-bearing trees (illustrated), by Prof. W. G. Farlow.

Report of commissioners on contagious diseases among cattle.

Annual meeting of Board: report of examining committee of Agricultural College; essay on a complete life history of the army worm and its parasites, by Prof. C. V. Riley; report on improvement of salt marshes in town of Marshfield, by Dr. C. A. Goessmann; statement of history and progress of the Board, by Marshall P. Wilder; notes on trees and tree planting, by Prof. C. S. Sargent; essay on saving and preparation of manure on the farm, by Dr. H. P. Wakefield; essay on best methods of offering premiums by agricultural societies, by Edmund Hersey; essay on green crops as a manure, by Milo J. Smith; report on fruits, extension of fruit culture and the immense crops of our country, fruits for Massachusetts, preservation and ripening of fruits, by Marshall P. Wilder; report of State inspector of fertilizers, potash salts, animal dust, bones, Peruvian guano, ammoniated superphosphates, fish, improved poudrette, by Dr. C. A. Goessmann; essay on farmers' institutes, by Hebron Vincent.

Appendix: reports of delegates appointed to visit exhibitions of societies: Essex, Middlesex North, Middlesex South, Worcester, Worcester County West, Worcester North-west, Worcester North, Worcester South, Worcester South-east, Hampshire, Franklin and Hampden, Hampshire, Highland, Union, Eastern Hampden, Franklin County, Berkshire, Housatonic, Hoosac Valley, Bristol County, Plymouth County, Hingham, Marshfield, Barnstable County, Nantucket, Martha's Vineyard.

Returns of societies; finances, analysis of premiums and gratuities.

Part II., 222 pages.

Preface. Officers of societies.

Addresses to the societies: elements of success on the farm, by Oliver S. Butler; the old and the new, by Rev. Washington Gladden; treatment of farm stock, by Henry Bergh.

Reports of committees: farms, farm work, ploughing, comparative value of crops for fodder, reclaimed meadows, improving pasture and waste land, experiments with manures, fruits, Indian corn, wheat, oats, rye, field and garden crops, dairy stock, breeding horses, sheep, swine, poultry, dairy products.

Analytical index to "Agriculture of Massachusetts;" reports I. to XXV., inclusive.

Twenty-sixth Report, 1878-79. 510 pages.

Part I., 366 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint; farmers' institutes.

Public winter meeting of Board at Hingham: address of welcome by Edmund Hersey; lecture on root and vegetable culture, by John B. Moore; lecture on the new agriculture, by Dr. James R. Nichols; lecture on the agriculture of Japan, by Prof. William S. Clark; lecture on my farming experience, by A. W. Paul; lecture on some of the legal rights and duties of farmers, how to buy a farm, how far farm extends,

what deed includes, hiring help, rights in road, ways over farm, as to farm fences, impounding cattle, farmer's liability for his animals, liability for his men, dogs, about fires, water rights and drainage, trespassing on farm, overhanging trees, by Edmund H. Bennett, LL.D.; lecture on the principles of breeding, by Chas. L. Flint; lecture on the war with insects, by Dr. Jabez Fisher; lecture on exhaustion of soils by the growth of plants, by Prof. Levi Stockbridge; lecture on recent researches in regard to seeds, absorption of water, absorption of oxygen during germination, temperature requisite for germination, degree of maturity, vitality, soundness, seed testing, by Prof. George L. Goodale. Report of commissioners on contagious diseases among cattle, glanders. Annual meeting of Board: report upon sheep husbandry in Massachusetts, destruction of sheep by dogs, winter treatment, summer treatment, diseases, profits, fattening sheep, by James S. Grinnell; report of State inspector of fertilizers, laws concerning commercial fertilizers, market prices, potash salts, bones, Peruvian guano, ammoniated superphosphates, by Dr. C. A. Goessmann; report on exhibition at Hingham, by Edmund Hersey; report on improvement of salt marshes in the town of Marshfield, by Dr. C. A. Goessmann. Returns of societies; finances, analysis of premiums and gratuities.

Part II., 144 pages.

Officers of societies. Exhibitions for 1879.

Addresses to the societies: suggestive farm hints, by T. C. Thurlow; the cause of hard times, by Julius H. Seelye; what the farm teaches, by George F. Mills; New England farming restored, by Prof. S. T. Frost. Essays: clearing a farm of boulders, by James J. H. Gregory; New England farming, by N. S. Hubbard; conditions of success on the farm, by Henry E. Hitchcock.

Reports of committees: farms; shade trees; manures; ploughing; fruits; apples; Indian corn; field crops of vegetables; neat cattle; milch cows; sheep husbandry; poultry, value of poultry product of Bristol County, the popular breeds, care of poultry, the egg, chickens, feeding chickens, what to feed laying hens; the dairy.

Indexes.

Twenty-seventh Report, 1879-80. 518 pages.

Part I., 414 pages.

Roster Board of Agriculture.

Introduction by Secretary Flint.

Public winter meeting of Board at Greenfield: opening address by James S. Grinnell; lecture on the husbandry and commerce of neat stock and its products, cheese, butter, by John M. Smith; lecture on my farming experience, and some of the lessons it has taught me, by Avery P. Slade; lecture on hygiene of the farm (illustrated), by Dr. Edward Hitchcock; lecture on the dairy cow, the Shorthorns, the Devons, by E. H. Hyde; lecture on the dairy interests of Massachusetts, by Henry E. Alvord; report of committee on butter premiums; lecture on

Guenon's system of selecting cows by the escutcheon (illustrated), proper selection, sketch of Guenon, his system, his classification, the escutcheon, names of the escutcheon, the bastards, the ovals, imperfections, on bulls, cause of the escutcheon, general view of the subject, by W. P. Hazard; lecture on sheep and lambs, by Arthur A. Smith; lecture on the relative value of several varieties of corn for feeding purposes, analyses of different varieties of corn (illustrated), by Dr. C. A. Goessmann; lecture on my farming experience, by Richard Webster.

Report of commissioners on contagious diseases among cattle, glanders.

Annual meeting of Board: report on improvement of salt marshes in town of Marshfield, by Dr. C. A. Goessmann; essay on reclaiming swamp lands as to profit and the public health, by B. P. Ware; report on exhibition at Greenfield, by Edmund Hersey; report of examining committee of Agricultural College; preamble and resolutions relative to uniting of Massachusetts Agricultural College with Amherst College; report of State inspector of fertilizers, market prices, potash salts, bones, fish fertilizers, ammoniated superphosphates, by Dr. C. A. Goessmann; report on farmers' institutes in Franklin County, by James S. Grinnell; contribution to the chemistry of fruit culture, by Dr. C. A. Goessmann and Prof. S. T. Maynard; essay on Jersey cattle, by O. B. Hadwen; essay on Guernsey cattle, by E. F. Bowditch; report on cultivation of sugar beet for manufacture of sugar, soil, treatment of soil, manuring lands for sugar beets, selection of varieties, sowing seed and treatment of beets, yield of beets, yield of juice and sugar, beet sugar molasses, cellular residue of beet root, produce of leaves, by Dr. C. A. Goessmann.

Returns of societies; finances, analysis of premiums and gratuities.

Part II., 104 pages.

Officers of societies. Exhibitions for 1880.

Reports of committees: on the pear, raising from seed, budding, grafting, soils and planting, the pear blight; the apple; the cranberry; Indian corn; the sugar beet; the turnip; carrots; radishes; parsnips; onions; beets; potatoes; nutritive value of roots; garden vegetables; dairy cows; the butter dairy; the poultry yard, best breed to keep, best feed, cleanliness.

Appendix: facts in regard to history of the Massachusetts Agricultural College, objects and purposes, character and efficiency of its work, course of study and training.

Indexes.

Twenty-eighth Report, 1880. 419 pages.

Part I., 254 pages.

Roster Board of Agriculture.

Introduction by Secretary John E. Russell; hay, fodder and ensilage, dairy products, corn, sheep, poultry, potatoes, root crops, apples, gardening.

Special meeting of Board at Boston; resignation of Secretary Chas. L. Flint; resolutions; election of John E. Russell.

Public winter meeting of Board at Southborough: address of welcome by Joseph Burnett; lecture on ornamental trees, by Prof. John Robinson; lecture on various methods of setting milk for cream, by Edward Burnett; lecture on the growing of corn, seed, ploughing, harrowing, fertilizing, planting, cultivation, corn stover, harvesting, husking, crows by Dr. E. Lewis Sturtevant; lecture on farm architecture, houses and barns (illustrated), by E. C. Gardner; lecture on the system of preserving green food in silos, by Dr. C. A. Goessmann.

Report of commissioners on contagious diseases among cattle, tuberculosis.

Annual meeting of Board: report on improvement of salt marshes in town of Marshfield, by Dr. C. A. Goessmann; report of examining committee of Agricultural College, farm, horticultural, chemical, financial; essay on experiments in potato culture, by B. P. Ware; essay on the cultivation of the basket willow, by Edmund Hersey; report of State inspector of fertilizers, market prices, potash compounds, mineral phosphates, bone fertilizers, ammoniated superphosphates, by Dr. C. A. Goessmann; experiment station.

Returns of societies; finances, analysis of premiums and gratuities.

Part II., 166 pages.

Officers of societies. Exhibitions for 1881.

Reports of committees: stock in general; swine, selection of breed, selection of male, selection and management of breeding sows, in and in breeding, management of pigs, hog pens, making manure, diseases of hogs, breeds, the Essex, Yorkshire, Chester White, Suffolk, Poland-China, Berkshire; poultry; new variety of winter apples; fine arts; needle work; floral department, Hoosac Valley Society; statements on corn culture; report of experiments in culture of potatoes.

Essays: apples as food for animals, by Dr. James R. Nichols; green fodder all the year, the preserving pits, filling the pits, mixing fodder in the pits, by O. B. Potter; the culture of corn, corn fertilization, the cultivation of corn, by Henry Stewart; the pioneer industries of Essex County, by David W. Low; harvest hymn, by Miss Marcia M. Selman.

Address on the social and intellectual life of the farmer, isolation of farmers' households, the farmer's exhausting labor, farmers' wives, slowness of mind, tendency to excessive conservatism, narrow utilitarianism and disregard for beauty, the possibility of improvement, recognition of the need, neighborhood fellowship, intercourse with men, interest in religion and its institutions, revived interest in farming, by Rev. L. S. Rowland.

Abstract of report of trustees of Agricultural College: the school, improvements of the year, farm, horticultural department, experiment station, chemical department, botanic department, trustees, overseers, faculty and students, course of study and training, prizes, etc.

Indexes.

Twenty-ninth Report, 1881. 428 pages.

Roster Board of Agriculture.

Introduction by Secretary Russell; ensilage, green fodder corn, dried fodder corn, pastures, agricultural statistics.

Public winter meeting of Board at Bridgewater: opening address by Dr. L. G. Lowe; lecture on the digestion and winter feeding of domestic animals, by Dr. George Austin Bowen; lecture on fruit growing, by Avery P. Slade; lecture on the necessity of a standard axle for vehicles, by Charles G. Davis; lecture on harvesting corn, by Prof. Levi Stockbridge; lecture on the sugars: their chemical nature and history, by Dr. James R. Nichols; lecture on the management of cultivated mowing lands, by John B. Moore; lecture on the nature of swamp muck and its value in agriculture, origin of muck deposits, their age, differences in muck, pond mud, etc., muck proper, chemistry of muck beds, nitrogen in muck, analysis of muck, analysis of cow manure, analysis of liquid excrement, muck humus, farm trials of muck, muck meadow experiments, views upon value of muck, by Dr. James R. Nichols; lecture on growing and feeding forage crops in New England, by A. W. Cheever; lecture on how the silo may be made available by any farmer, by Dr. W. L. Faxon; lecture on the farmer's home of the past and future, by Prof. P. A. Chadbourne; lecture on animal growth and nutrition, composition of foods, German tables, manure value of foods, nutrients consumed, rations for cows, ensilage, cost of silos, drying wastes silo preserves, green foods better than dry, fermentation makes food digestible, warm food, food combination, by Prof. J. W. Sanborn; discussion on animal growth and nutrition; discussion on fruit culture.

Report of commissioners on contagious diseases among cattle, hog cholera.

Annual meeting of Board: essay on the chemistry of nitrogen in its relations to agriculture, by Dr. James R. Nichols; essay on the sanitary essentials of the home and farm, by Dr. J. P. Lynde; report of the State inspector of fertilizers, market prices, potash compounds, bone fertilizers, animal matter, dried ground fish, ammoniated superphosphates, peat, by Dr. C. A. Goessmann; essay on the agriculture of Massachusetts for forty years, sheep, swine, poultry, hay, corn, oats, potatoes, tobacco, rye, barley, buckwheat, dairy, by James S. Grinnell. Returns of societies; finances, analysis of premiums and gratuities, officers of societies, exhibitions for 1882.

Appendix: the culture of corn, by J. B. Lawes, LL.D., F.R.S., and Henry Stewart; the nitrogen supply, by J. B. Lawes, LL.D., F.R.S.

Abstract of report of trustees of Agricultural College, wants of the institution.

Index.

Thirtieth Report, 1882. 459 pages.

Roster Board of Agriculture.

Introduction by Secretary Russell.

Special meeting of Board at Amherst.

Public winter meeting of Board at Northampton: opening address by H.

C. Haskell; address of welcome by Prof. P. A. Chadbourne; lecture on the milk question, shall milk be sold? how shall milk be sold? if milk is not sold what shall be done with it? by Henry E. Alvord; lecture on Indian corn, by Dr. B. D. Halsted; lecture on the influ-

ence of chemistry in the development of a rational system of stock feeding, experiments with non-nitrogenous substances, with nitrogen containing organic substances, nitrogenous constituents of food, non-nitrogenous constituents of food, mineral constituents of food, tables, physiological or nutritive value of an article of food, tables, by Dr. C. A. Goessmann; lecture on tobacco and its culture in the Connecticut River Valley, by J. M. Smith; discussion on tobacco; lecture on fowls for the table and market, laws of breeding, grading and crossing, practical points, English experience, broilers, fall chickens, fattening, killing and picking, capons, fattening pullets, by M. C. Weld; lecture on barb wire and the fence question, cost of fences, the English fence system, the fence in America, wire fencing, barb wire in use, by Henry M. Smith; lecture on agricultural machinery and implements, by James S. Grinnell; lecture on forest fires, by Prof. C. S. Sargent; lecture on breeding of horses, by John E. Russell.

Report of commissioners on contagious diseases among cattle.

Annual meeting of Board: essay on value of a protective tariff to the farmer, by Joseph S. Fay; essay on raising and selecting field and garden seeds, by O. B. Hadwen; essay on the army worm, by Daniel Round; report of the State inspector of fertilizers, market prices, analyses of fertilizers, by Dr. C. A. Goessmann; essay on the silo and ensilage, by B. P. Ware.

Returns of societies; finances, analysis of premiums and gratuities, officers of societies, exhibitions for 1883.

Appendix: report of Board of Control of Agricultural Experiment Station; report of chemist, list of experiments proposed for year 1883.

Report on twenty-seventh cattle show of Nantucket Agricultural Society, by James S. Grinnell.

Paper on mineral constituents in plant growth, experiments with grapevines, experiments with strawberries, experiments with peach trees, by Dr. C. A. Goessmann.

Abstract of report of trustees of Agricultural College, educational plan of college, repairs, improvements, wants.

Index.

Thirty-first Report, 1883. 472 pages.

Roster Board of Agriculture.

Introduction by Secretary Russell.

Public winter meeting of Board at Lowell: opening address, libraries, manufacturing; railroads, military record, by A. C. Varnum; address by Mayor J. J. Donovan; lecture on veterinary problems of the day, by Dr. D. E. Salmon; lecture on the place and the work of the State College, by President J. C. Greenough; lecture on experiments with fertilizers, by John W. Pierce; lecture on market gardening, by John B. Moore; lecture on Jersey cattle in America: their present and future, by Richard Goodman, Jr.; lecture on how shall we fertilize our farms? by Elbridge Cushman; lecture on cranberry culture and its insect pests, by Winfred A. Stearns.

Annual meeting of Board : nomenclature of fruits ; report of State inspector of fertilizers, market prices, analyses, composition of some compounds in fertilizers, by Dr. C. A. Goessmann.

Returns of societies ; finances, analysis of premiums and gratuities, officers of societies, exhibitions for 1884.

Appendix : first report of Board of Control of Agricultural Experiment Station : report on field plats, drains, culvert, corn experiments, drainage of buildings, forage crops, feeding barn, experiments, hay, grounds, pig feeding, report on corn experiments and drainage, report on ensilage, silo, door, weights, fodder corn, temperature, bacteria, fermentation, ensilage in silo, experiments with pigs, by Prof. Manly Miles ; report of horticultural department, grasses, experimental fruit plats, influence of stock on scion, testing new varieties of fruits, diseases of plants, destruction of injurious insects, currant worm, cabbage worm, curculio or plum weevil, potato beetle, rose bug, germination of weed seeds, by Prof. S. T. Maynard ; report of chemist, fodder and fodder analyses, miscellaneous analyses, valuation of fertilizers and fertilizer analyses, chemistry in fruit culture, peaches and peach yellows, by Dr. C. A. Goessmann.

Essay on sunshine on the farm, by Dr. James R. Nichols.

Report on the fair of the Martha's Vineyard Agricultural Society, by James S. Grinnell.

Abstract of report of trustees of Agricultural College : report of president, report of department of agriculture, report of farm superintendent, report of botanic department, report of chemical department, experiments carried on at college since 1870, report of mathematical department, report of department of English and modern languages, report of military department, trustees, overseers and faculty.

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Thirty-second Report, 1884. 570 pages.

Roster Board of Agriculture.

Introduction by Secretary Russell.

Public winter meeting of Board at Great Barrington : address of Merritt

I. Wheeler ; address of Joseph A. Kline ; lecture on water and its supply for our crops, by John W. Pierce ; lecture on utilization of sewage, ancient method of gathering sewage, cesspools, methods of disposal, disposal of sub-surface irrigation, irrigation and agriculture, irrigation at Paris, sanitation, transportation, temperature of sewage, dilution of sewage, favorable soils, by Dr. Henry J. Barnes ; discussion on plants in their relation to disease ; lecture on hindrances to successful farming, debt, cultivating too much land, pastures, woodland, firewood, fences, manures, harvesting, roots, weeds, insects, dairying, laborers, improved animals, implements, by James S. Grinnell ; lecture on enzootic abortion in cows, by Dr. F. S. Billings ; lecture on forest tree planting, by Avery P. Slade ; lecture on pastures and pasturing, what shall be size of pastures ? pasturing cattle, sheep and horses together, shall we plough pastures ? using commercial fertilizers on pastures, drainage and irrigation, weeds and bushes, by T. S. Gold ;

lecture on short-horned cattle in Massachusetts, by William R. Sessions; lecture on stock husbandry in Massachusetts, polled cattle, by A. W. Cheever; discussion on forestry; lecture on poultry and eggs, by A. C. Hawkins; discussion on corn; experiment stations.

Annual meeting of Board.

Returns of societies; finances, analysis of premiums and gratuities, officers of societies, exhibitions for 1885.

Report of State inspector of fertilizers, market values, analyses, composition of some compounds in fertilizers, by Dr. C. A. Goessmann.

Second report of Board of Control of Agricultural Experiment Station: report of director; observations in regard to insects injurious to the apple, notes upon insects injurious to farm and garden crops, on causes of certain diseases of grasses, observations regarding vitality of seed of various weeds, vitality of seeds as affected by age, destruction of peach buds by cold, by Prof. S. T. Maynard; report on feeding experiments with corn ensilage, with gluten meal as a constituent of daily diet of milch cows, influence of feed on composition of milk, observations with milk, notes on feeding experiments with pigs, by Dr. C. A. Goessmann; report on field experiments, fodder corn (without manure) upon underdrained plats, influence of fertilizers on quantity and quality of fodder crops, experiments with potatoes, adaptation of some reputed forage crops from other localities to our climate and soil, rates of digestibility of both beans and straw with empty pods, experiments with corn ensilage, analyses of fodder and fodder crops, by Dr. C. A. Goessmann; experiments with special fertilizers in fruit culture, currants and peaches; miscellaneous analyses; valuation of fertilizers and fertilizer analyses; on examination of drinking water; meteorology.

Report of commissioners on contagious diseases among cattle.

Report of committee on forest trees, by Prof. John Robinson.

Abstract of report of trustees of Agricultural College; report of president, department of practical agriculture, botanic department, chemical department, department of anatomy and physiology, mathematical department, military department, theoretical and practical course of instruction, trustees, overseers and faculty, course of study and training.

Index.

Thirty-third Report, 1885. 538 pages.

Roster Board of Agriculture.

Introduction by Secretary Russell.

Public winter meeting of Board at Framingham: opening address by S. B. Bird; address by Rev. Josiah H. Temple; lecture on potato culture, by Edmund Hersey; potato exhibit from experiment department of Houghton farm, by Henry E. Alvord; lecture on errors in estimating the value of manures, undervaluation or overvaluation, under-estimating fertilizers when comparing them with barnyard manure, soil sometimes overvalued as plant food, unleached wood ashes undervalued, stones as plant food, proper valuations of manures, plaster, salt and lime not manures, hen manure overvalued, by James J. H.

Gregory; lecture on tuberculosis in cattle, the extension of tuberculosis in American cattle, prevention, by Dr. F. S. Billings; lecture on the garden fence, by Prof. L. H. Bailey, Jr.; lecture on rotation of crops, relation of mineral constituents of plants to composition of soil, on relation of botanical characteristics of our cultivated plants to chemical composition and physical condition of soil, character of manures at our disposal, by Dr. C. A. Goessmann; lecture on corn culture, by B. P. Ware; lecture on some of the injurious insects of Massachusetts, cut worms, tobacco worms, apple maggot, asparagus beetle, grapevine "thrips," rose leaf "thrips," by Prof. J. A. Lintner; lecture on Guernsey cattle in America, by Silas Betts; lecture on laws relating to public and private ways, repairs, guideposts, shade trees, parks and commons, drinking troughs and fountains, public use of highways, law of road, equestrians, pedestrians, omnibuses, stages and horse cars, purposes for which highways may be used, use of highways by adjoining owners, private ways, "don't," by B. W. Potter; lecture on artificial rearing of poultry, first experience with incubators, poultry buildings, by James Rankin.

Annual meeting of Board.

Returns of societies; finances, analysis of premiums and gratuities, officers of societies, exhibitions for 1886.

Appendix: report of State inspector of fertilizers, trade values of fertilizing ingredients in raw materials and chemicals, analyses, composition of some compounds in fertilizers, by Dr. C. A. Goessmann.

Additional notes upon trees and tree planting in Massachusetts, by Prof. C. S. Sargent.

Essays: protection of trees against insects, by Charles B. Rice; farm life, by Ethan Brooks; raising calves, by E. F. Bowditch.

Report of examining committee of Agricultural College.

Report of cattle commissioners for last quarter of current year, horses, neat stock.

Dates for holding fairs, how determined.

Reports: on bulls, by John C. Dillon; butter, by J. Henry Goddard.

Address at Hoosac Valley fair, by Henry L. Dawes.

Lectures: social and political life of the farmer, by Allen P. Soule; chemistry on the farm, by Louis P. Nash; the climate and horticulture of New England, by John E. Russell; the propagation of trees and shrubs from seed, soil and situation, sowing, second year's treatment, nursery, conifers, box system, rhododendrons, azaleas and kalmias, by Jackson Dawson; heating greenhouses, by Joseph H. Woodford; a comparison of manures for the garden and orchard, by Prof. G. C. Caldwell.

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Thirty-fourth Report, 1886. 554 pages.

Roster Board of Agriculture.

Introduction by Secretary Russell.

Special meeting of Board at Barre: pleuro-pneumonia, resolutions, discussion, report of Dr. Austin Peters, discussion.

Public winter meeting of Board at Barre: address of J. Henry Goddard; opening address by Charles A. Gleason; lecture on Holstein cattle in America, color, horns, flexibility, by Gerrit S. Miller; lecture on beef fattening for the New England market, by Joseph A. Titus; lecture on specialties in farming, by Avery P. Slade; lecture on experiments in potato culture (illustrated), by Edmund Hersey; lecture on reclaiming land, by Francis H. Appleton; lecture on sheep husbandry, by E. F. Bowditch; lecture on influence of agriculture on climate, evaporation, by M. W. Bartlett; lecture on homeopathy in agriculture, by William H. Bowker; lecture on progressive agriculture, variety and quality of products, farm stock, implements, improvement in lands, demands and possibilities of future, by Ethan Brooks; lecture on swine for the home market, by Edward Burnett; lecture on corn culture, by J. Henry Goddard; lecture on the dairy, by Henry E. Alvord.

Annual meeting of Board: resolutions on death of Marshall P. Wilder; powers and duties of overseers of Massachusetts Agricultural College defined; resignation of Secretary Russell.

Returns of societies; finances, analysis of premiums and gratuities, officers of societies, exhibitions for 1887.

Appendix: report of State inspector of fertilizers, by Dr. C. A. Goessmann.

Report of cattle commissioners, neat stock, glanders, hog cholera.

Report on fair of Massachusetts Horticultural Society, by Dr. J. P. Lynde.

Essays: corn, manner of cultivation, manner of harvesting, discussion, by Philander S. Sears; fruit as a farm product, by E. W. Wood.

Fourth report of Board of Control of Agricultural Experiment Station: report of director; feeding experiments with milch cows, fodder and fodder analyses, analyses of feed stuffs with reference to fertilizing constituents they contain, by Dr. C. A. Goessmann; field experiments, fodder corn raised upon underdrained and exhausted lands partly fertilized with single articles of plant food and partly without use of any manurial matter, fodder corn and corn ensilage, influence of fertilizers on quantity and quality of some prominent fodder crops, experiments with cultivation of fodder crops to furnish continuous supply of suitable green fodder for dairy stock during summer season, experiments with potatoes, observations with scabby potatoes, miscellaneous field experiments with farm and garden crops, by Dr. C. A. Goessmann; valuation of fertilizers and fertilizer analyses, trade values of fertilizing ingredients in raw materials and chemicals, in superphosphates, special manures and mixed fertilizers of high grade, analyses of fertilizers, analyses of well water; meteorology; report of treasurer.

Index.

Thirty-fifth Report, 1887. 818 pages.

Roster Board of Agriculture.

Introduction by Secretary Sessions.

Special meeting of Board at Boston: resolutions on death of John B. Moore; election of William R. Sessions.

Public winter meeting of Board at Springfield: opening address by Ethan Brooks; lecture on fruit culture in Massachusetts, apple, pear, peach,

plum, quince, cherry, grape, strawberry, currant, blackberries, red raspberry, blackcaps, new fruits, cold storage, by Prof. S. T. Maynard; lecture on forestry and arboriculture in Massachusetts, by Prof. John Robinson; lecture on injurious insects (illustrated), canker worms, white-marked tussock moth, eye-spotted bud moth, codling moth, grape berry moth, American bean weevil, pea weevil, insecticides, by Prof. C. H. Fernald; lecture on our homes, by W. L. Warner; address of Lieutenant-Governor J. Q. A. Brackett; address of Prof. Levi Stockbridge; lecture on is ensilage a success in New England? silos, location, construction and cost, crops for ensilage, cost of cultivation and harvesting, filling silo, covering and weighting, what are the changing processes in the silo? removing ensilage from silo and feeding it, ensilage as food for farm stock, by Henry E. Alvord; address of T. S. Gold; lecture on the hay field and English hay, by Dr. C. A. Goessmann; lecture on the value of veterinary science to the State, by Dr. Austin Peters; lecture on the business side of farming and the value of organization, by Dr. George A. Bowen; lecture on contagious diseases: how they are caused and how to prevent them in our homes, by Dr. Alfred F. Holt; lecture on milk farming, by Newton Smith; lecture on creameries, by L. T. Hazen.

Special meeting of Board at Springfield: report of committee on farmers' institutes.

Annual meeting of Board: resolutions on death of Dr. James R. Nichols.

Returns of societies; finances, analysis of premiums and gratuities. officers of societies, exhibitions for 1888.

Essays: agricultural education, by Henry H. Goodell; the chemistry of the kitchen, by Dr. James P. Lynde; our homes: their power and influence, by J. W. Stockwell.

Report of cattle commissioners: neat stock, hog cholera, glanders, tuberculosis; report on glanders, by Dr. J. F. Winchester.

Paper on the Orthoptera of New England (illustrated), characters of order, external anatomy, internal anatomy, synopsis of families, definition of terms, list of New England Orthoptera, index of families and genera, index of species, by Prof. C. H. Fernald.

Report of State inspector of fertilizers, by Dr. C. A. Goessmann.

Fifth report of Board of Control of Agricultural Experiment Station: report of Director Goessmann; feeding experiments, with milch cows, with pigs; fodder supply and analyses of fodder articles, fodder corn and corn ensilage; salt; field experiments with fodder corn, influence of fertilizers on quantity and quality of some prominent fodder crops, experiments with wheat, experiments with potatoes, observations with scabby potatoes, miscellaneous field experiments with farm and garden crops (illustrated); suggestions upon planting trees and small fruits, selection of trees and planting, preparation of trees and plants for planting, soil and its preparation, methods of planting, after care, by Prof. S. T. Maynard; valuation of fertilizers and fertilizer analyses, trade values; analyses of water; compilation of analyses made at Amherst of fodder articles, agricultural chemicals and refuse materials used for fertiliz-

ing purposes; meteorology, record of maximum and minimum temperature and rainfall, Amherst, 1836-87; report of treasurer; plans. Index.

Thirty-sixth Report, 1888. 676 pages.

Roster Board of Agriculture.

Introduction; distribution of annual report, licensed dogs, dairying, crops of the year, by Secretary Sessions.

Public winter meeting of Board at Easthampton: opening address by S. T. Seelye, D.D.; address of Dr. George B. Loring; lecture on experience with commercial fertilizers, by S. G. Hubbard; lecture on chemical fertilizers, what do plants require? how has it been shown that nitrogen, phosphoric acid and potash are needed by crops? phosphoric acid, potash, nitrogen, how shall we use these materials? can chemical fertilizers take the place of farmyard manure? by Prof. G. H. Whitche; lecture on paramount fertilizers, by Dr. E. Lewis Sturtevant; lecture on profit from sheep, by J. D. Avery; lecture on life in Japan, by William Wheeler; lecture on cranberry culture, by J. W. Stockwell; remarks on the apple orchard, by P. M. Augur and T. S. Gold; lecture on strawberries and currants for market, by E. W. Wood; lecture on market gardening, location and soil, manures, seeds, seed sowing and crop culture, markets and marketing, by A. H. Smith; lecture on irrigation, by W. W. Rawson; lecture on hay for market, conditions of success, habits and physical construction of grass plants, seed bed, fertilization, moisture, good seed, obstacles, hay raising as a specialty, by J. B. Walker; lecture on reminiscences of the Orient, by Henry H. Goodell; lecture on co-operative dairying, organization, buildings, factory management, business management, cream gathering system, by S. W. Clark; lecture on farmers' wives and daughters, by Mrs. George R. Chase; remarks of Moses Humphrey, of James Draper, of H. A. Barton, Jr., of B. P. Ware; lecture on the uses of association by and among agriculturists, by J. M. Hubbard; remarks of Oscar Ely, of H. A. Barton, Jr., of S. A. Hickox, of A. W. Cheever, of Secretary Sessions.

Annual meeting of Board.

Essays: American agriculture, by Dr. George B. Loring; Massachusetts agriculture, by James S. Grinnell; a hundred acres or more, by Elbridge Cushman; market gardening, by W. W. Rawson.

Returns of societies; finances, analysis of premiums and gratuities, officers of societies, exhibitions for 1889.

Appendix: statutes relating to Board of Agriculture. to agricultural and horticultural societies, regulations of the Board.

Report of cattle commissioners, horses, neat stock, hog cholera; appendix on tuberculosis, by Dr. J. F. Winchester.

Sixth report of Board of Control of Agricultural Experiment Station: cuts; report of Director Goessmann; feeding experiments with milch cows, physiological or feeding value, commercial value or actual cost of a fodder article; feeding experiments with pigs; analyses of fodder articles; field experiments with fodder corn (illustrated), influence of

fertilizers, experiments with fodder crops for green fodder, experiments with potatoes, observations with scabby potatoes (illustrated); the potato scab, by Prof. J. E. Humphrey; experiments with root crops (illustrated); notes on miscellaneous field work; new laws for regulation of sale of commercial fertilizers, fertilizer analyses, valuation of fertilizers and fertilizer analyses, trade values; analyses of water; compilation of analyses made at Amherst of agricultural chemicals and refuse materials used for fertilizing purposes and of analyses of fodder articles, fruits and sugar-producing plants, etc., by W. H. Beal; meteorology; report of treasurer; plans.

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Thirty-seventh Report, 1889. 740 pages.

Report of Secretary, 407 pages.

Roster Board of Agriculture.

Introduction; statistics of creameries, synopsis of crop reports, mortgaged and abandoned farms, weather data, gypsy moth, by Secretary Sessions.

Public winter meeting of Board at Fitchburg: address of Mayor Culley; opening address by Rev. C. S. Brooks; lecture on orchard management, fertilization, insects and their destruction, thinning fruits, handling and marketing, by Dr. Jabez Fisher; lecture on market gardening as a business, by Peter Henderson; lecture on impressions received from rambles in the West, by Prof. Levi Stockbridge; lecture on economical feeding of dairy stock, by Prof. W. W. Cooke; lecture on grading-up dairy stock, how to reduce cost of production, grading-up, fundamental laws and conditions, pedigrees, practical effect of chance breeding, external indications of good dairy stock, selection, development, difference in cost of keeping, cost of butter production, by F. D. Douglas; lecture on the farm and farmer the basis of national strength, food question, capital in agricultural land, farm as place to grow men, educational influences of farm, an independent middle class, agricultural depression, Massachusetts agriculture, a conservator of conservatism, by Prof. William H. Brewer; lecture on the economic disposition of milk, too much milk, factory cheese, domestic cheese, summer milk, factory butter, dairy butter, fertilizing elements, sale of milk, by Z. A. Gilbert; lecture on the economical disposition of the wastes of the dairy, by Prof. William P. Brooks; lecture on how to make poultry keeping profitable, by Dr. G. M. Twitchell.

Annual meeting of Board: resolutions on death of Dr. J. P. Lynde, on death of Avery P. Slade, resolutions concerning gypsy moth.

Report of examining committee of Agricultural College, act of Congress, act of Legislature, college located, college farm, stock, horticultural department, botanic museum, anniversary exercises, college fund, instruction at the college.

Essays: agricultural societies and their management, by J. H. Rowley; soils of Massachusetts, by Prof. N. S. Shaler; choosing an occupation, by J. Henry Goddard; tuberculosis, by Dr. William Holbrook; tuberculosis, by Dr. George B. Loring; farming in England, by Dr. George B. Loring.

Returns of societies ; finances, analysis of premiums and gratuities, exhibitions for 1890, agricultural directory.

Appendix : report of cattle commissioners, horses, swine.

Index.

Seventh Report of Experiment Station, 333 pages.

Cuts and maps ; report of Director Goessmann.

Feeding experiments : with milch cows, summary, net cost of feed, feeding or nutritive value of fodder articles, green crops *v.* English hay ; record of twelve cows which served station for experiments to ascertain the cost of feed for production of milk ; creamery record of station ; experiments with pigs ; fodder analyses.

Field experiments : to compare the influence of an addition of nitrogen in different combinations ; influence of fertilizers on quantity and quality of prominent fodder crops ; experiments with field and garden crops (illustrated) ; with green crops for summer feed of milch cows ; notes on miscellaneous field work.

Report of department of vegetable physiology : general account of fungi, slime moulds, bacteria, downy mildews and white rusts, water moulds, leaf gall fungi, true moulds, insect fungi, smuts, rusts, jelly fungi, toadstools, puff-balls, yeasts, etc., imperfect fungi, the potato scab (illustrated), smut of barley and oats, spot disease of sugar beets, rot of potatoes, fungus in cellar, black spot of rose leaves, nematode disease of cucumbers, by Prof. J. E. Humphrey.

Special work in chemical laboratory : commercial fertilizers, trade values, laws, instructions to dealers, licensed dealers, analyses ; analyses of water ; compilation of analyses made at Amherst of agricultural, chemical and refuse materials used for fertilizing purposes and of fodder articles, fruits, sugar-producing plants, dairy products, etc., by W. H. Beal ; meteorology, record of temperature, 1836-89 ; report of treasurer.

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Thirty-eighth Report, 1890. 774 pages.

Report of Secretary, 450 pages.

Contents : roster Board of Agriculture.

Introduction : weather, crops of year, dairy industry, statistics of creameries, insects, gypsy moth, trespassing, agricultural societies, appropriations, legislation, farmers' institutes, abandoned farms, meetings of Board, distribution of annual report, library, by Secretary Sessions.

Public winter meeting of Board at Worcester : address of Mayor Harrington ; opening address by J. Lewis Ellsworth ; lecture on what have our experiment stations done for the farmers ? by Prof. G. H. Whitcher ; lecture on birds of Massachusetts, water, land, woodpeckers, crows, jays and blackbirds, sparrow family, bounty or scalp acts, by Dr. B. H. Warren ; address of Governor J. Q. A. Brackett ; lecture on the dairy temperament of cows (illustrated), by Governor W. D. Hoard ; lecture on some conditions for success in New England agriculture, by Dr. G. M. Twitchell ; lecture on law, or nature's modes of action, by Prof. I. P. Roberts ; lecture on the agriculture of the Nile valley, by John E.

Russell; lecture on the horse, by C. M. Winslow; unsound stallions; lecture on what can legislation do for agriculture? by T. S. Gold.

Annual meeting of Board: resolutions on death of Velorous Taft.

Report of examining committee of Agricultural College, college located, farm purchased and buildings erected, present farm management, buildings, annual examination, experiment station, botanic department, horticultural department.

Report of Board to House of Representatives on condition of the forests of the State, the need and method of their protection for sanitary and other reasons, and the encouragement of tree planting.

Report of Board to House of Representatives as to the birds that inhabit the State, etc.

Essays: the promotion of agriculture, by Francis H. Appleton; care and management of milch cows, barn plans, by George L. Clemence; the farmer: his relations to the manufacturer and mechanic, by John G. Avery; the Massachusetts Board of Agriculture and the agricultural societies: can they broaden and improve their work? Board how constituted, distribution of State bounty, system at fault, too many societies, twelve-mile limit, farming population as a basis, present Board too large, plan of reorganization, how shall we broaden and improve work of societies? cattle show business overdone, bounty controlled by this Board, a new departure in use of State bounty, dairy schools, cooking schools, road making, sanitation of milk farms, travelling schools, State control of milk supply, sterilization of milk, abandoned farms, dispense with annual report, reform the institutes, other boards of State, conclusion, by William H. Bowker; essentials to success in farming, purpose, love of calling, knowledge, perseverance, business principles, industry, economy, virtue, integrity, good health, good judgment, executive ability, power to say "No," the family relation, by P. M. Harwood.

Agricultural exhibitions for 1891.

Returns of societies; finances, analysis of premiums and gratuities, agricultural directory.

Papers from Massachusetts crop reports: the State Board of Agriculture, lettuce and cucumber culture under glass, the grape industry in Massachusetts, the dairy industry in Massachusetts.

Report of cattle commissioners: tuberculosis, its relations to agricultural industry and public health; pleuro-pneumonia, hog cholera, glanders, rabies, tuberculosis.

Index.

Eighth Report of Experiment Station, 324 pages.

Maps; report of Director Goessmann.

Feeding experiments: with milch cows, general remarks on our previously reported feeding experiments with milch cows, conclusions of 1890; creamery record of station; method of milk analysis, methods of butter analysis; experiments with lambs; experiments with young pigs; fodder analyses; methods of analysis of cattle foods.

Field experiments: production and selection of fodder crops; economical feeding of farm live stock; effect of fertilizers on oats; experiments

with grasses and leguminous plants; experiments with field and garden crops (illustrated); experiments with phosphoric acid for manurial purposes in farm practice; experiments with grass land; report on general farm work.

Report of department of vegetable physiology: black knot of plum, cucumber mildew, brown rot of stone fruits, potato scab, damping-off, mildew of spinach, grapevine mildew, potato rot, elder rust, rust of blackberries and raspberries, the hollyhock rust, disease of oats, notes on fungicides, plates, by Prof. J. E. Humphrey.

Special work in chemical laboratory: commercial fertilizers, trade values, laws, list of dealers, analyses, methods of fertilizer analysis; analyses of water; compilation of analyses made at Amherst of agricultural chemicals and refuse materials used for fertilizing purposes and of fodder articles, fruits, sugar-producing plants, dairy products, etc., by W. H. Beal; meteorology; report of treasurer; station property.

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Thirty-ninth Report, 1891. 841 pages.

Report of Secretary, 499 pages.

Contents: roster Board of Agriculture.

Introduction: weather, crops of year, crop reports, publications, legislation, appropriations, nails for marking trees, dairy bureau, gypsy moth, abandoned farms, tuberculosis, returns of societies, farmers' institutes, meetings of Board, agricultural directory, by Secretary Sessions.

Special meetings of Board at Boston; meetings of executive committee.

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Report of dairy bureau, financial statement.

Returns of societies; finances and analysis of premiums and gratuities, membership, institutes, summary.

Annual meeting of Board: resolutions on death of E. F. Bowditch, exhibitions for 1892.

Report of examining committee of Agricultural College.

Report of Board to Legislature on tuberculosis.

Essays: the inundated lands of Massachusetts, swamps of Massachusetts, marine marshes of Massachusetts, by Prof. N. S. Shaler; the past and future of the Board of Agriculture, by J. W. Stockwell; the laws of competition as affecting the Massachusetts farmer, by Charles A. Mills; the employment of farm labor, by W. A. Kilbourn.

Agricultural directory.

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Ninth Report of Experiment Station, 352 pages.

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Feeding experiments: with milch cows; creamery record of station; method of milk analysis, methods of butter analysis; remarks on analysis of fodder and fodder analyses; methods of analysis of cattle foods; experiments with steers, results; experiments with lambs, conclusions; three feeding experiments with thoroughbred pigs, conclusions.

Field experiments: to ascertain effect of different combinations of nitrogen on rye; experiment with grasses; experiments with field and garden crops; with Stowell's evergreen sweet corn for ensilage; to study economy of using different commercial sources of phosphoric acid for manurial purposes in farm practice; experiments with a western variety of dent corn for ensilage; experiments with grass land; report on general farm work.

Report of department of vegetable physiology: rotting of lettuce, powdery mildew of cucumber, a new potato disease, another disease of cucumbers, rye fungi, club root of cabbages, blight of celery, clover fungi, a fish hatchery fungus, rust of poplars, anthracnose of chestnut, black knot of plum, diseases of tobacco, preparation and application of fungicides, plate, by Prof. J. E. Humphrey.

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ANNUAL REPORTS OF THE SECRETARY OF THE STATE

1860-1892. — BOARD OF AGRICULTURE.

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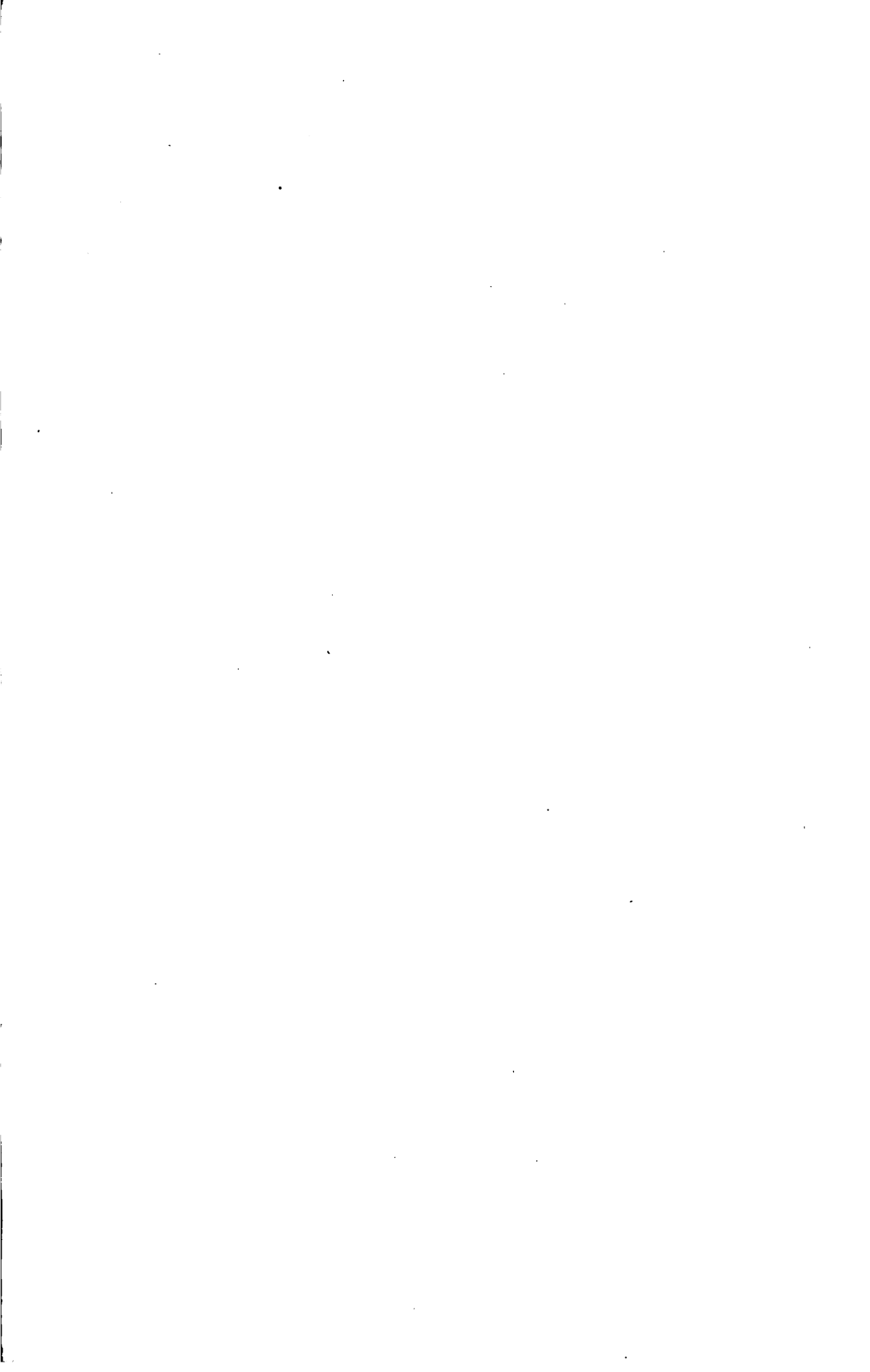
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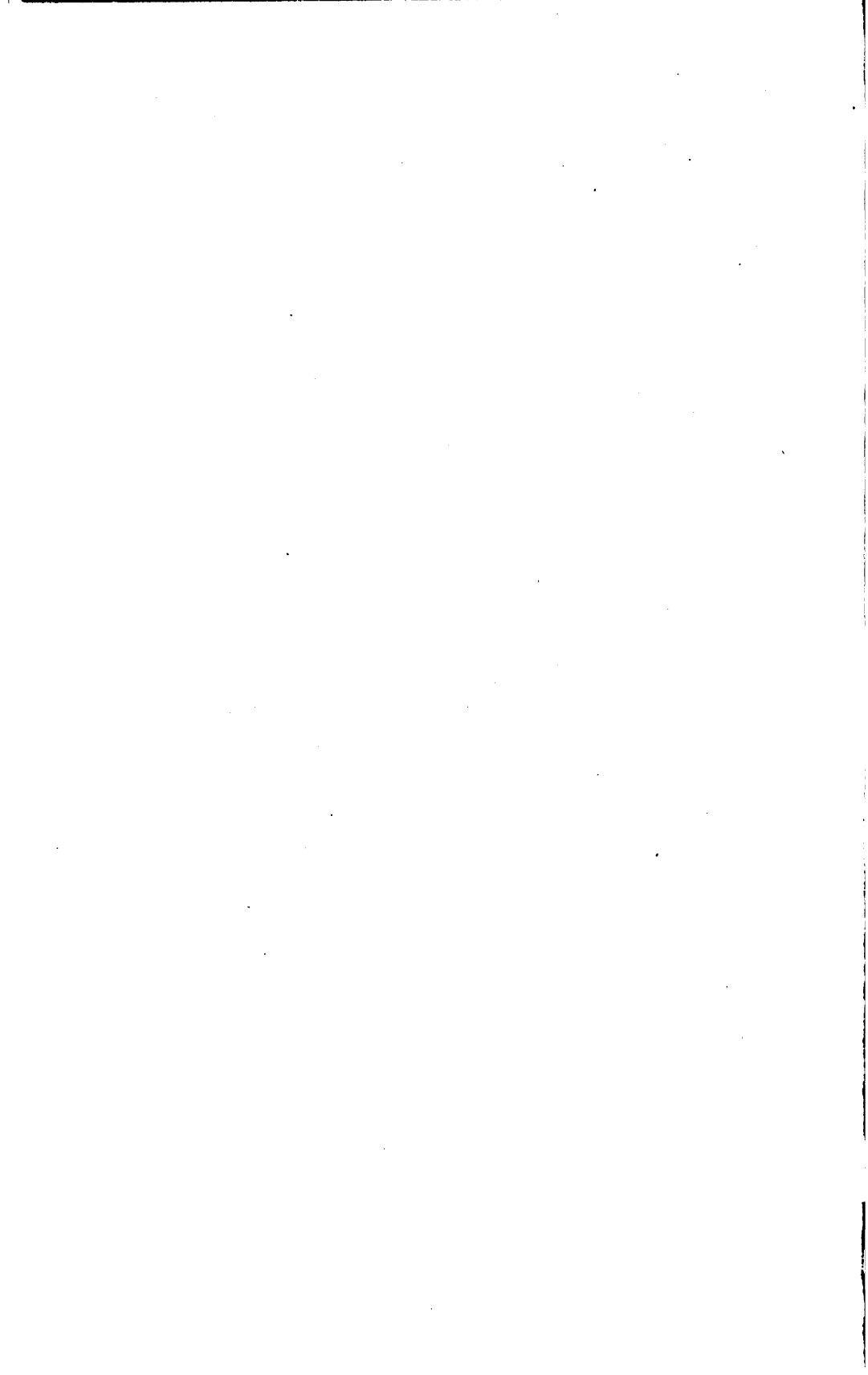
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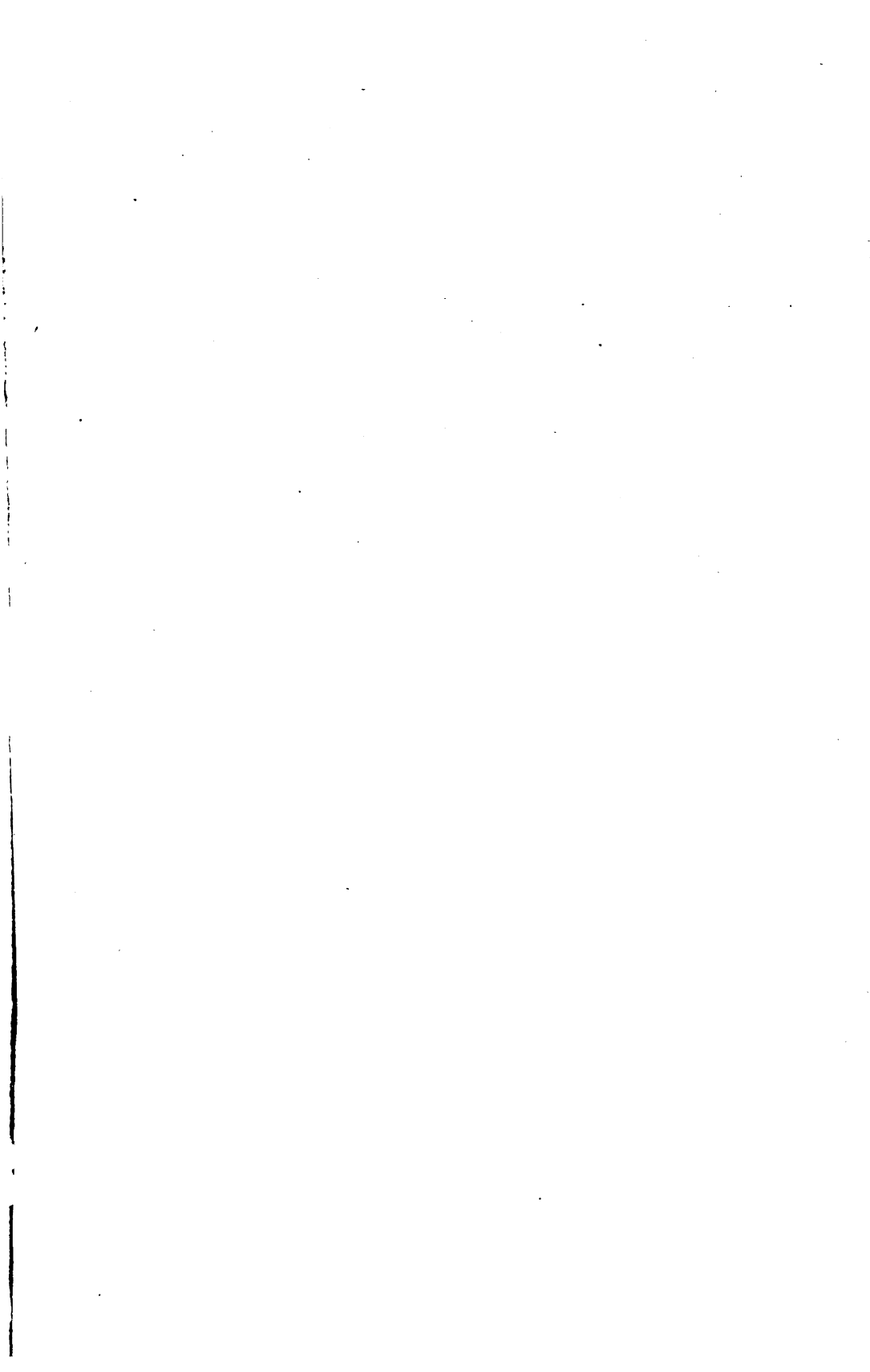
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